Volume-4 Issue-01

Dayananda Sagar
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SCHOOL OF ENGINEERING

SOE-BULLETIN

The Official Newsletter of **School of Engineering**

JANUARY 2026

www.dsu.edu.in

SCHOOL OF ENGINEERING

Vision

Transform lives through excellence in engineering education, research and innovation with an emphasis on sustainability, inclusive technologies and global needs.

Mission

1.Design and deliver contemporary engineering curricula to address regional and global needs while emphasizing ethics, values, integrity and regional relevance.

2.Carryout high impact academic research, industry projects and innovation activities with active student engagement to advance science and engineering knowledge and state-of-the- art industry practices.

3.Develop regional and national leaders to advance the society and economy.

INDEX

SCHOOL OF
ENGINEERING

INTERNATIONAL ACTIVITIES

Guest Lecture on “Exploring the Boundaries of AI: Limitations, Societal Impact and Ethical Considerations”

The Department of CSE (AI & ML), School of Engineering, Dayananda Sagar University, successfully organized a guest lecture titled “Exploring the Boundaries of AI: Limitations, Societal Impact and Ethical Considerations.” The session was delivered by Dr. Manjeet Rege, Professor and Chair of Software Engineering and Data Science, St. Thomas University, USA.

The lecture offered insightful perspectives on recent advancements in Artificial Intelligence, with discussions spanning deepfake detection, AI-assisted decision-making, humanoid robotics, Artificial General Intelligence (AGI), and the ethical and safety challenges associated with AI systems. Dr. Rege also highlighted evolving workforce trends, emphasizing the rising demand for AI expertise, enhanced career opportunities, and the shifting employment landscape favoring STEM and healthcare sectors.

In addition, the session addressed pressing global challenges such as climate change and potential future pandemics, underscoring the role of AI as a transformative solution. The event was addressed by Dr. Jayavrinda Vrindavanam, Professor & Chairperson, CSE (AI & ML) and concluded with a vote of thanks by Dr. Mude Nagarjuna Naik, Associate Professor, CSE (AI & ML).

Dayananda Sagar University

Devarakaggalahalli, Harohalli, Kanakapura Road, Bengaluru South District - 562112

SCHOOL OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
(ARTIFICIAL INTELLIGENCE & MACHINE LEARNING)

GUEST LECTURE ON

"EXPLORING THE BOUNDARIES OF AI: Limitations, Societal Impact and Ethical Considerations"

Dr. Manjeet Rege
Professor and Chair
Software Engineering and Data Science
St. Thomas University, USA

Targeted Audience:
4th & 6th Semester Students

23 January 2026
11:00 AM
SOE, LH3

CHIEF PATRONS:
- Dr. D. Hemachandra Sagar, Chancellor, DSU
- Dr. D. Premachandra Sagar, Pro-Chancellor, DSU

PATRONS:
- Dr. B S Sathyanarayana, Vice Chancellor, DSU
- Dr. Prakash S, Pro Vice Chancellor, DSU
- Dr. Puttamadappa C, Registrar, DSU
- Dr. Udaya Kumar Reddy, Dean, SOE, DSU
- Ms. Supriya Mathew, Vice President- International Affairs
- Dr. Sudarshan T S B, Dean (R&D), DSU

CONVENER:
- Dr. Jayavrinda Vrindavanam V, Professor & Chairperson CSE (AI & ML), DSU

STAFF COORDINATORS
- Dr. Mude Nagarjuna Naik, Associate Professor, CSE (AI & ML)
- Ms.Darshini M, Student Counsellor, International Affairs, DSU

STUDENT COORDINATORS

Dhruv VM, ENG24AM0165, Kanduri Hari Hara Deeraj ENG24AM0338
4th sem- A Section, CSE(AI & ML)

SCHOOL OF
ENGINEERING

WORKSHOPS / SKILL DEVELOPMENT PROGRAMS

One-Week Hands-on Training Programme for Teaching and Non-Teaching Staff

The Department of Computer Science & Engineering, School of Engineering, Dayananda Sagar University, successfully organized a One-Week Hands-on Training Programme for Teaching and Non-Teaching Staff from 12th to 16th January 2026. The programme, coordinated by Dr. S. Ramesh, Professor, CSE, and Dr. S. Jeeva, Associate Professor, CSE, aimed at enhancing practical knowledge, technical skills, and laboratory-handling capabilities in core computer science domains.

The program was inaugurated by Dr. Girisha G. S., Chairperson – CSE, who emphasized the importance of continuous learning and hands-on exposure. The training covered key areas such as Design and Analysis of Algorithms, Database Management Systems, Compiler Design and System Software, and Embedded System Design, with a strong focus on practical implementation. The initiative was well received and reflected the department's commitment to continuous professional development.


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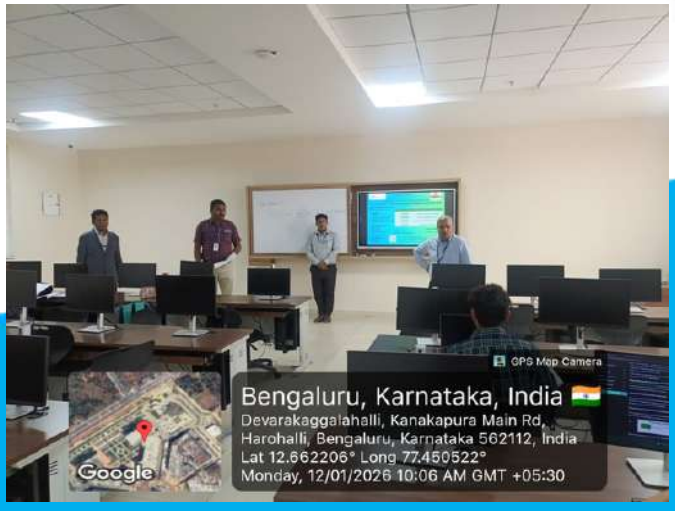
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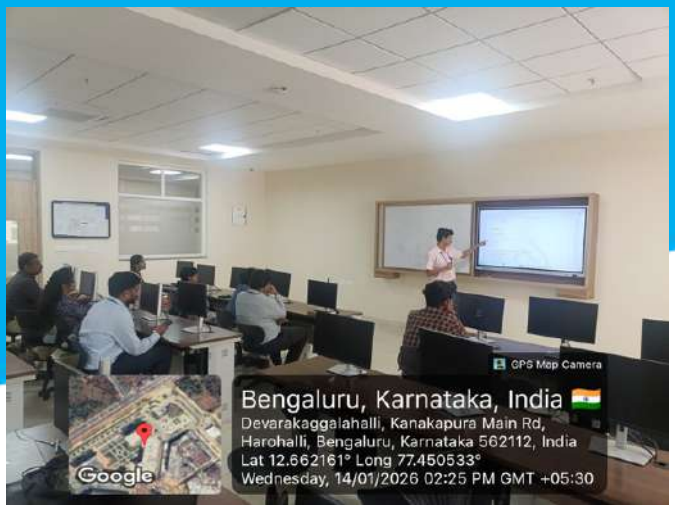
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Note : Captured by GPS Map Camera

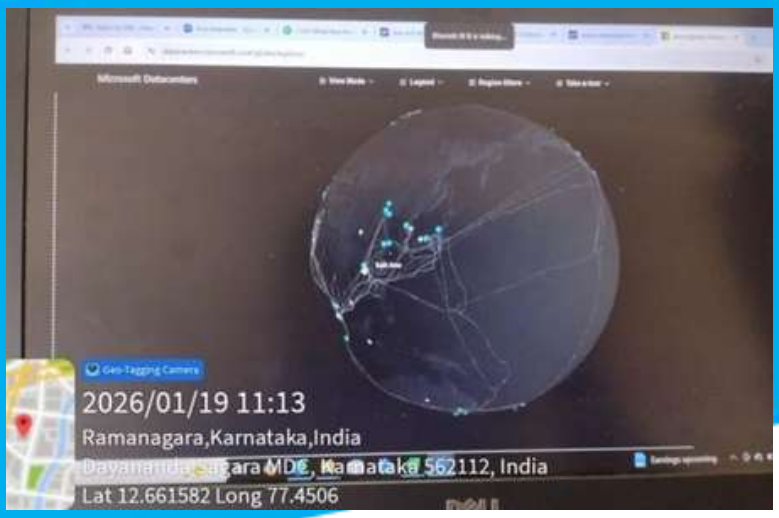
Value Added Course on “AWS Cloud Practitioner Mastery: Concepts to Certification

The Department of Computer Science & Engineering, School of Engineering, Dayananda Sagar University, conducted a Value Added Course on “AWS Cloud Practitioner Mastery: Concepts to Certification” from 15th January to 20th January 2026. The programme, coordinated by Prof. Mutubala, Department of CSE, was designed to provide participants with a practical and foundational understanding of cloud computing using Amazon Web Services (AWS), while preparing them for the AWS Certified Cloud Practitioner examination.

The course introduced core AWS services, security, pricing models, and architectural principles through structured modules delivered across five days. It was targeted at IV and VI Semester students, aiming to equip them with essential cloud and digital skills that foster innovation, employability, and leadership. The initiative also aligned with Sustainable Development Goals, particularly Quality Education and Decent Work and Economic Growth.

The sessions were delivered by Dr. Gokulakrishnan, Prof. Bharath M. B., and Prof. Soumadip Mondal, Department of CSE, and were well received by the participants for their industry relevance and exam-oriented approach.


USE CASES OF CLOUD COMPUTING
1. Data Storage and Backup:
Cloud Storage Services:
Examples include Amazon S3, Google Drive, and Microsoft Azure Blob Storage.
2. Disaster Recovery and Business Continuity:
Disaster Recovery Solutions:
Cloud services like Azure Site Recovery offer backup and disaster recovery to protect against data loss.
•Business Continuity: Minimal downtime and quick recovery in case of failure.
3. Software as a Service (SaaS):
•Examples: Salesforce, Microsoft Office 365, Google Workspace.
•Benefit: Eliminates the need for on-premise installation, easy updates, and access from anywhere.
and Applications:
using AWS Elastic Beanstalk or Google App Engine for automatic scaling and
Ramanagara,Karnataka,India
Dayananda Sagara MDC, Karnataka 562112, India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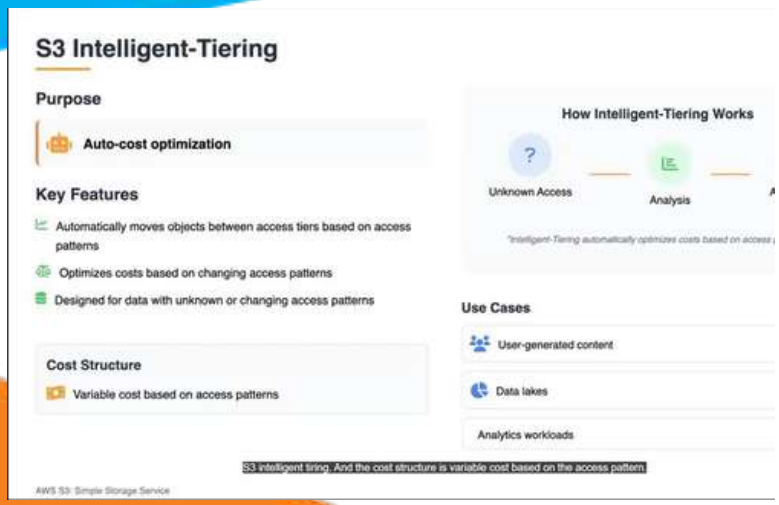
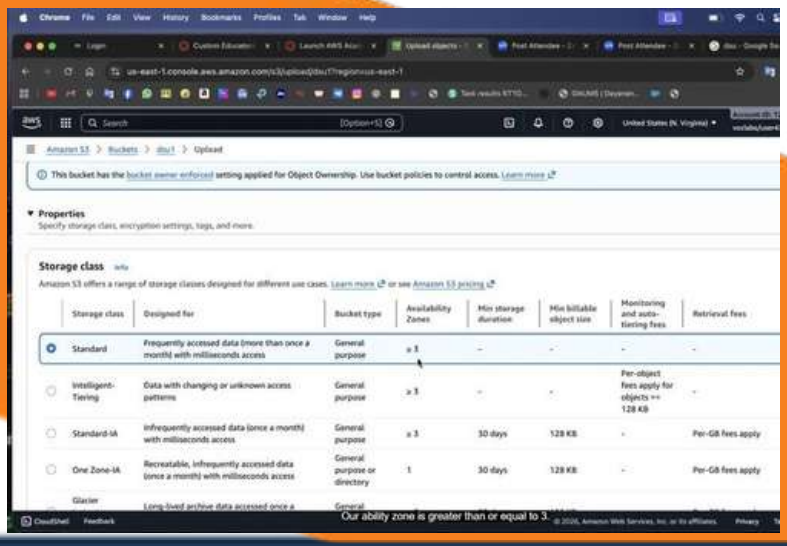

S3 Intelligent-Tiering
Purpose
Auto-cost optimization
Key Features
Automatically moves objects between access tiers based on access patterns
Optimizes costs based on changing access patterns
Designed for data with unknown or changing access patterns
Cost Structure
Variable cost based on access patterns
How Intelligent-Tiering Works
Unknown Access
Analysis
Use Cases
User-generated content
Data lakes
Analytics workloads
S3 intelligent tiring. And the cost structure is variable cost based on the access pattern.
AWS S3: Simple Storage Service

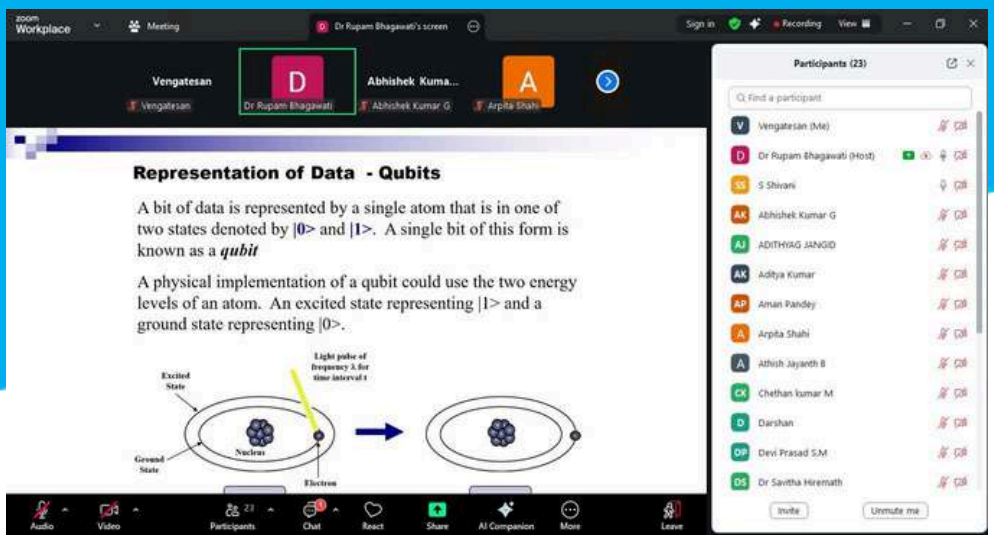

Properties
Storage class
Standard
Intelligent-Tiering
Standard-IA
One Zone-IA
Glacier
Our ability zone is greater than or equal to 3.

Value Added Course on “Quantum Machine Learning”

The Department of Computer Science & Engineering, School of Engineering, Dayananda Sagar University, conducted an online Value Added Course on “Quantum Machine Learning” from 05th January to 10th January 2026. The programme, coordinated by Dr. K. Vengatesan, Professor, Department of CSE, aimed to introduce students and faculty members to the emerging interdisciplinary domain that integrates quantum computing principles with machine learning techniques, addressing the growing importance of quantum technologies in solving complex computational problems.

The course was structured into progressive modules covering Introduction to Quantum Computing and QML, Mathematical Foundations for QML, Machine Learning Essentials, and Quantum Machine Learning Algorithms. Key quantum concepts such as qubits, superposition, and entanglement were discussed, along with classical ML fundamentals and QML applications. The sessions were delivered by Dr. Rupam Bhagawati, Associate Professor, CSE, and included interactive discussions and practical examples. The programme successfully enhanced participants’ understanding of both foundational and advanced aspects of Quantum Machine Learning.


DAYANANDA SAGAR UNIVERSITY
School of Engineering
Department of Computer Science and Engineering
VALUE-ADDED COURSE
ON
QUANTUM MACHINE LEARNING
Date : 5th Jan to 10th Jan 2026 From 11:00 AM to 1:00 PM
Resource Person:
Dr. Rupam Bhagawati, Associate Professor, CSE
Participants (21)

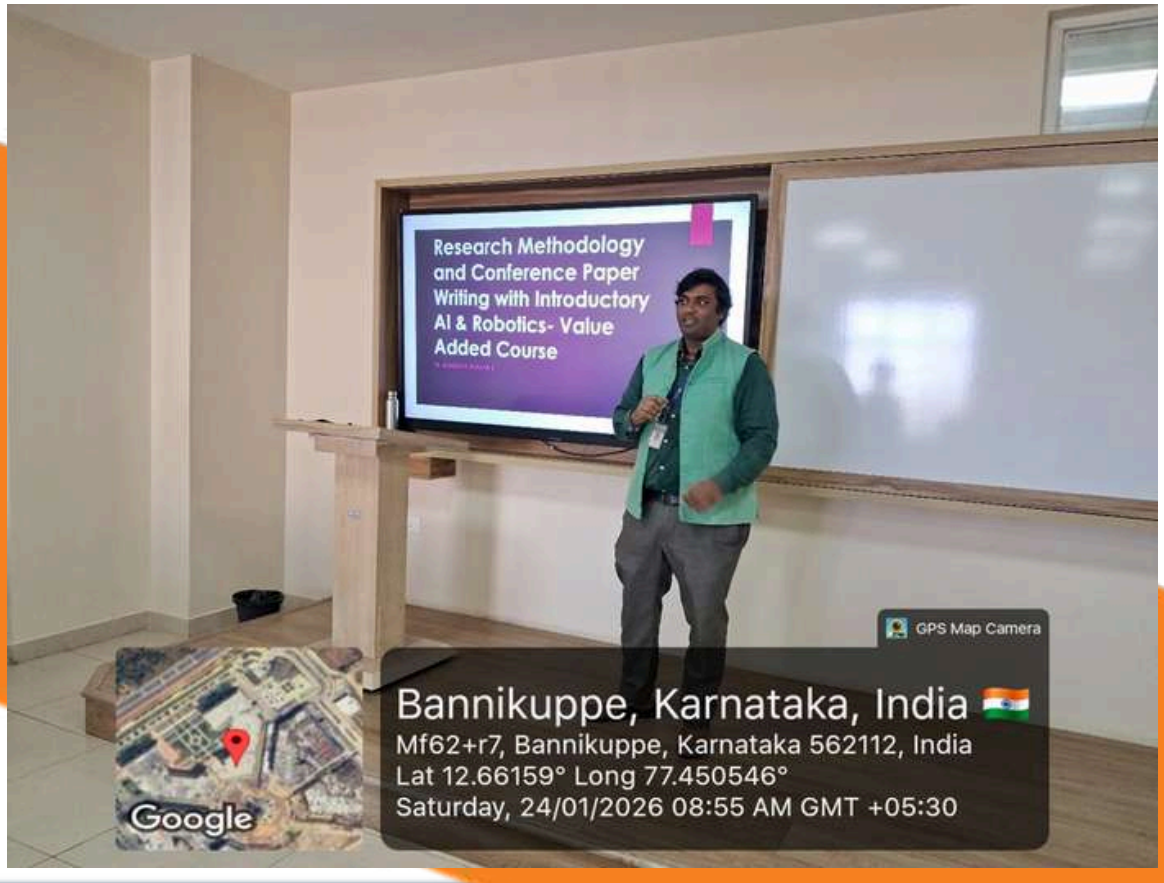

Representation of Data - Qubits
A bit of data is represented by a single atom that is in one of two states denoted by |0> and |1>. A single bit of this form is known as a qubit
A physical implementation of a qubit could use the two energy levels of an atom. An excited state representing |1> and a ground state representing |0>.
Excited State
Ground State
Nucleus
Electron
Participants (23)

Value Added Course (VAC) – Research Methodology and Conference Paper Writing with Introductory AI & Robotics Applications - Session 1

The Department of Artificial Intelligence and Robotics Engineering, School of Engineering, Dayananda Sagar University, conducted Session 1 of the Value-Added Course titled “Research Methodology and Conference Paper Writing with Introductory AI & Robotics Applications” on 24 January 2026, School of Engineering, for IV Semester AI & Robotics Engineering students.

The session was delivered by Dr. Bharath Kumar S, Assistant Professor, Department of AI & Robotics Engineering, DSU, under the patronage of Dr. Pramod Kumar Naik, Chairperson, AI & Robotics Engineering, and Dr. Udaya Kumar Reddy K. R., Dean, School of Engineering, DSU. The programme was coordinated by Dr. Rupam Bhaduri, Dr. Gangadhar T G, Dr. Raguvaran S, Dr. Puneeth N, Prof. Lalit Ashutosh, Prof. Vikas Vishwakarma, and Prof. Bhavya L.

The lecture covered the basics of research methodology, including research types, lifecycle, problem identification, literature review, ethical practices, and conference paper writing, with interactive discussions related to AI & Robotics applications. The session witnessed active student participation and contributed positively towards strengthening the department’s research culture.




Dayananda Sagar University
School of Engineering
DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND ROBOTICS ENGINEERING
VALUE ADDED COURSE (VAC)
on
Research Methodology and Conference Paper Writing with Introductory AI & Robotics Applications - Session 1
Speaker:
Dr. Bharath Kumar S
Assistant Professor
Department of AI & Robotics
Dayananda Sagar University
Faculty Coordinators
Dr. Rupam Bhaduri
Dr. Gangadhar T G
Dr. Raguvaran S
Dr. Puneeth N
Prof. Lalit Ashutosh
Prof. Vikas Vishwakarma
Prof. Bhavya L
Chairperson
Dr. Pramod Kumar Naik
Chairperson,
Dept. of Artificial Intelligence & Robotics Engineering
Dean
Dr. Udaya Kumar Reddy K. R
Dean, SOE, DSU
Date- 24-01-2026
Time- 8.30 onwards
Venue- A341

Virtual Twin for Satellite Workshop

Dr. Nagaraja S. R., Professor & Chairman, Department of Aerospace Engineering; Dr. Arun Balodi, Professor & Chairman, Department of Electronics and Communication Engineering; Dr. Prashantha Kumar, Associate Professor, and Prof. Sripad Kulkarni, Assistant Professor, Department of Aerospace Engineering, Dayananda Sagar University, attended an online workshop on Virtual Twin for Satellite organized by Dassault Systèmes La Foundation on 19–20 January 2026, along with participants from NITTE, Thapar University, and Manipal University. The workshop provided insights into virtual twin and model-based systems engineering approaches for satellite design and lifecycle management.

Gmail

Sripad Kulkarni <sripad-ae@dsu.edu.in>

Re: Virtual Twin for Satellite - Workshop | Your opportunity to lead an impactful project

DSU AERO AE <chairman-ae@dsu.edu.in> Thu, 15 Jan at 11:30 PM
To: SALIM Huzefa <Huzefa.SALIM@3ds.com>
Cc: Chairman ECE <chairman-ece@dsu.edu.in>, Prashantha Kumar <prashanthakumar-ae@dsu.edu.in>, Sripad Kulkarni <sripad-ae@dsu.edu.in>

Dear Sir

The following professors are likely to attend the workshop in an online mode.

Name	Mobile No.	email	Department
Dr. Nagaraja S R	9845641131	chairman-ae@dsu.edu.in	Aerospace Engineering
Dr. Arun Balodi	9634305552	chairman-ece@dsu.edu.in	Electronics and Communication Eng.
Dr. Prashantha Kumar	9843969404	prashanthakumar-ae@dsu.edu.in	Aerospace Engineering
Prof. Sripad Kulkarni	7406907182	sripad-ae@dsu.edu.in	Aerospace Engineering

With Regards

Dr. Nagaraja S. R.
Professor and Chairperson
Department of Aerospace Engineering,
Dayananda Sagar University,
Devarakaggalahalli, Harohalli,
Kanakapura Road, Bengaluru South Dt,
Bengaluru – 562 112

Mobile: +91-9845641131
Email: chairman-ae@dsu.edu.in
Website : www.dsu.edu.in

SCHOOL OF
ENGINEERING

WEBINARS / SEMINARS / TECHNICAL TALKS

Guest Lecture on “Transforming space assets into reconfigurable and intelligent software platforms”.

A guest lecture on "Transforming space assets into reconfigurable and intelligent software platforms" was hosted by DSU's Aerospace Engineering department on 28th Jan 2026. Mr. Rakesh Verma, Co-Founder & CTO of Graviton Space, shared insights on software integration in aerospace, followed by a campus drive. Students gained exposure to cutting-edge tech and networking opportunities.

Invited Talk on Molecules to Devices: Organic Electronics

The Department of Chemistry, School of Engineering, Dayananda Sagar University (DSU) organized an invited talk on 30.01.2026 on the topic “Molecules to Devices: Organic Electronics.”

The invited resource person for the talk was Prof. Praveen C. Ramamurthy, Professor, Department of Inorganic and Physical Chemistry, Indian Institute of Science (IISc), Bengaluru. He delivered an insightful lecture highlighting the transition from molecular design to functional organic electronic devices, along with current research trends and applications.
The event was attended by approximately 200 participants, including Professors, Associate Professors, Assistant Professors, and B.Tech students from various departments. The talk was highly inspiring and intellectually enriching, motivating students and faculty alike.

DAYANANDA SAGAR UNIVERSITY

INSTITUTION'S INNOVATION COUNCIL

SCHOOL OF ENGINEERING

An Invited Talk

On

Molecules to devices: Organic Electronics

Resource Person:

Prof. Praveen C Ramamurthy

Department of Materials Engineering Chair,
Interdisciplinary Center for Water Research,
Indian Institute of Science (IISc), Bengaluru, KA.

Organized by:

Department of Chemistry

School of Engineering,

Dayananda Sagar University, Harohalli

Patrons:

- **Dr. D. Hemachandra Sagar,** Chancellor, DSU
- **Dr. D. Premachandra Sagar,** Pro-Chancellor, DSU
- **Shri Galiswamy,** Secretary, DSU
- **Dr. B. S. Satyanarayana,** Vice Chancellor, DSU
- **Dr. S Prakash,** Pro-Vice Chancellor, DSU
- **Prof. R. Janardhan,** Pro-Vice Chancellor, DSU
- **Dr. E N Ganesh,** Pro-Vice Chancellor, DSU
- **Dr. Puttamadappa C.,** Registrar, DSU
- **Dr. Udaya Kumar Reddy K. R.,** Dean, SoE, DSU

30th January 2026

10:30 AM

Venue: Lecture Hall 5, SoE, DSU

Faculty Coordinators:

Prof. A. V. Raghu
Dr.Pradeep Kumar Badiya
Dr. Sai Prasad Nayak
Dr. Bhavana Rikhari
Prof . N. S. Venkataramanan (Chairman, Dept. of Chemistry)
Faculties, Department of Chemistry

Register Here

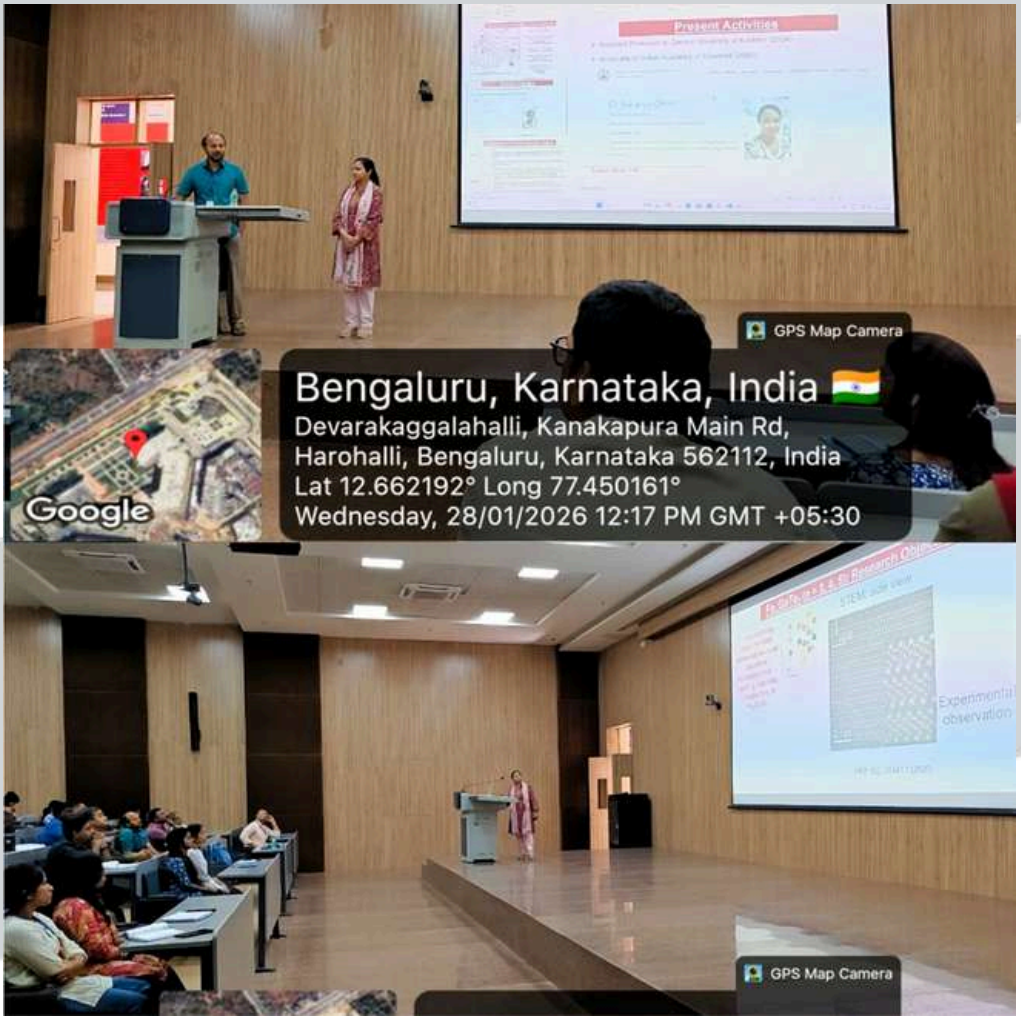
Open for all Faculties, Research Scholars and Students

Scientific Interaction with Dr. Sukanya Ghosh

The Department of Physics, School of Engineering, organized a scientific interaction and invited talk by Dr. Sukanya Ghosh, Assistant Professor, Central University of Kashmir, on 28 January 2026. The session witnessed enthusiastic participation from faculty members of Physics and Chemistry, along with research scholars.

Dr. Ghosh delivered an insightful lecture on her current research in theoretical condensed matter physics, with emphasis on DFT calculations on low-dimensional magnetic materials, effectively linking experimental observations with theoretical understanding. The talk was highly interactive, with discussions on synthesis challenges, the role of defects in magnetic properties, DFT methodologies, and future research directions.

An extended interaction session enabled meaningful academic exchange, fostering ideas for potential collaborations and offering valuable guidance to young researchers. The event enriched the department's academic environment and strengthened research interactions.

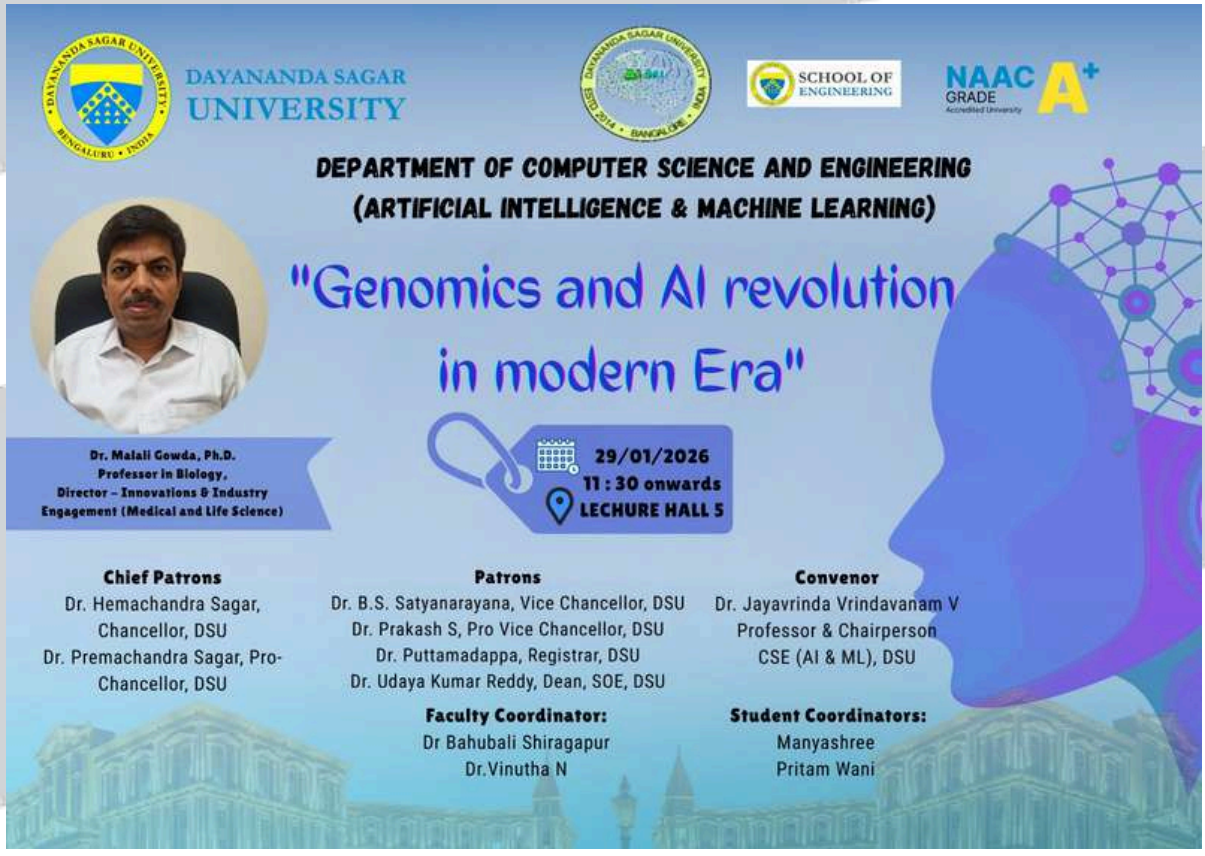


Guest Talk on “Genomics and AI Revolution in the Modern Era”

The Department of CSE (AI & ML), School of Engineering, Dayananda Sagar University, successfully conducted a guest lecture titled “Genomics and AI Revolution in the Modern Era” on 29 January 2026 for the 6th semester students of the department.

The session was delivered by Dr. Malali Gowda, Ph.D., Professor in Biology and Director – Innovations & Industry Engagement (Medical and Life Science). The lecture highlighted the transformative role of Artificial Intelligence in genomics, with a focus on its applications in modern biological research, healthcare, and life sciences, offering valuable interdisciplinary insights to the students.

The program commenced with an address by Dr. Jayavrinda Vrindavanam, Professor & Chairperson, CSE (AI & ML), who welcomed the gathering and emphasized the importance of interdisciplinary learning. The event was coordinated by Dr. Bahubali Shiragapur, Professor, CSE (AI & ML) and Dr. Vinutha N, AssociateProfessor, CSE (AI & ML) as Faculty Coordinators, with Ms. Manyashree and Mr. Pritam Wani, students of 6th semester, serving as Student Coordinators. The session witnessed active participation from students and faculty members, contributing to an enriching academic experience.



SCHOOL OF ENGINEERING

EVENTS: PROFESSIONAL SOCIETIES / CLUB ACTIVITIES

Department Orientation Program for 3rd Year ,6th Semester 2023-24 Batch

The Department of Computer Science & Engineering, School of Engineering, Dayananda Sagar University, conducted an Orientation Programme for III Year, VI Semester students on 21st January 2026 (Wednesday) during the Academic Year 2025–26 (Even Semester). The programme aimed to welcome students into the new academic year and orient them towards the curriculum structure, departmental activities, industry expectations, and pathways for academic and professional growth.

During the session, students were familiarized with the Departmental Vision and Mission, academic scheme, class timetable, electives, laboratory courses, mini-project work, and MOOC courses (NPTEL). The programme also covered evaluation patterns, attendance norms, NBA and NAAC accreditation, outcome-based education, internships, placement activities, coding platforms, certifications, and departmental clubs. Emphasis was placed on discipline, ethics, professional growth, and effective communication using WhatsApp, Google Mail, and Google Classroom.

The programme was coordinated by Prof. Sowmya H. D., Department of Computer Science & Engineering.


National Assessment and Accreditation Council
(NAAC) & National Board of Accreditation (NBA)
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Devarakaggalahalli, Kanakapura Main Rd, Harohalli,
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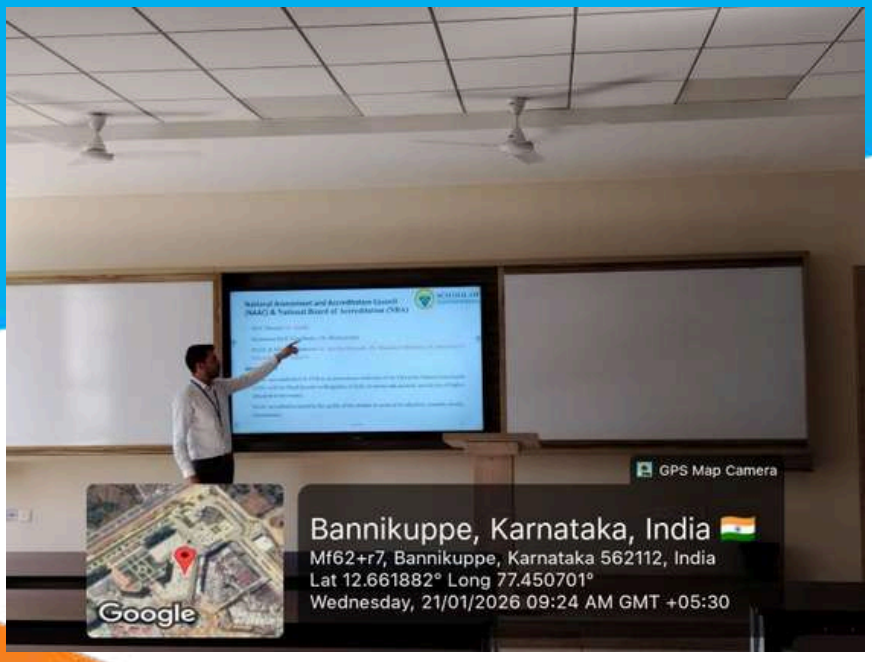
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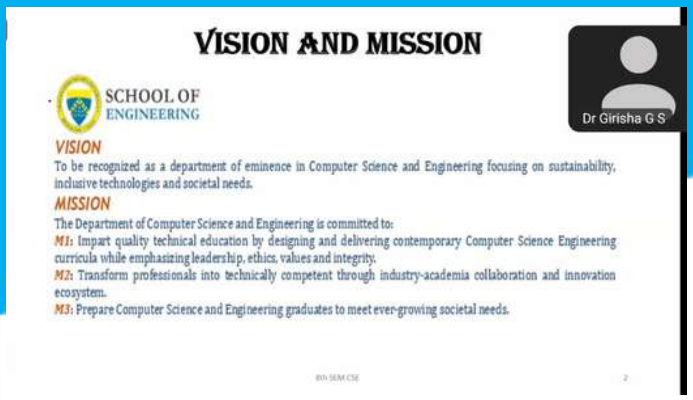
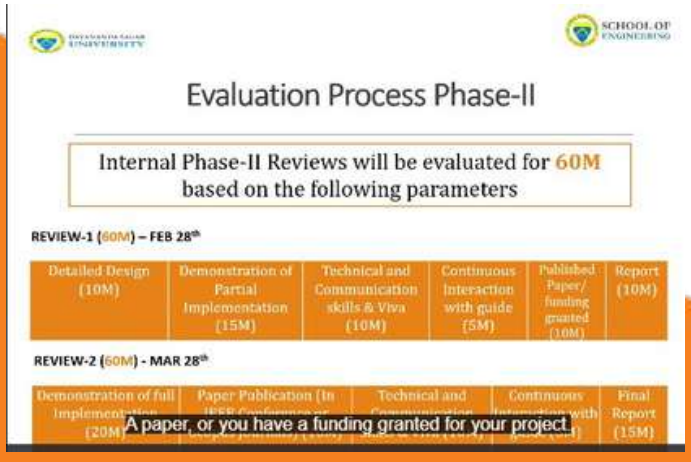
Google

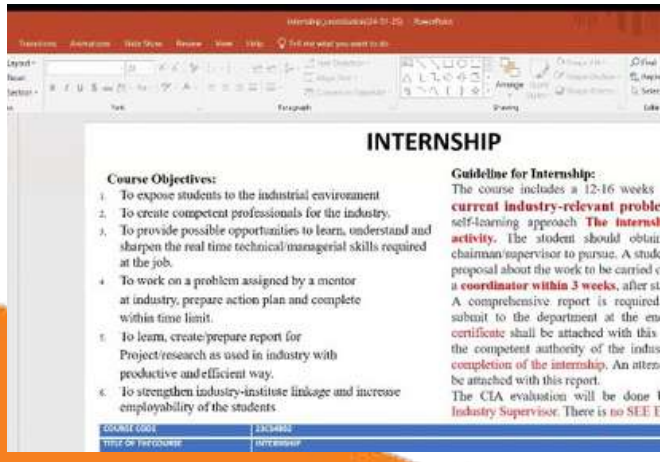
Orientation program 8th Semester CSE Students

The Department of Computer Science & Engineering, School of Engineering, Dayananda Sagar University, conducted an Orientation Programme for VIII Semester CSE students on 24th January 2025 in online mode for all nine sections. The programme was conducted by Mr. Santhosh M, Batch Advisor and Faculty Coordinator, along with Dr. Sivananda Reddy, Placement Coordinator, Dr. George Fernandez, Internship Coordinator, and Dr. Girisha G. S., Chairperson – CSE.

The session focused on familiarizing students with the Department Vision and Mission, academic scheme, project review schedules, internship requirements, placement activities, and examination-related procedures, providing clarity on final-semester expectations and career planning.



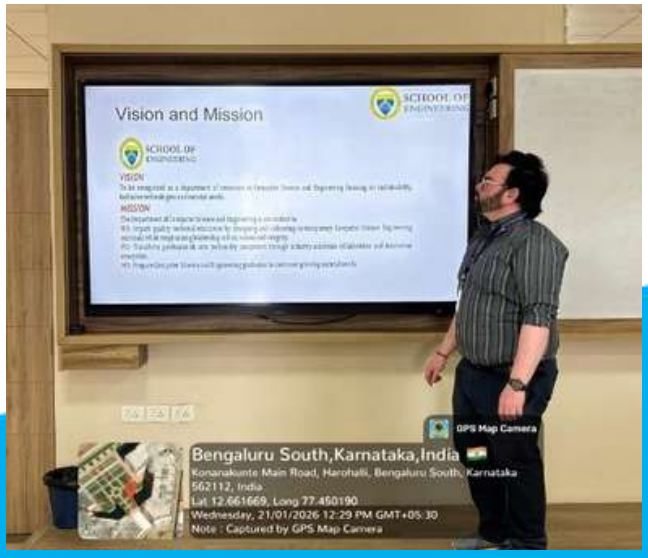




Orientation Programme for 2nd Year, IV Semester (2024–28 Batch)

The Department of Computer Science & Engineering, School of Engineering, Dayananda Sagar University, conducted an Orientation Programme for II Year, IV Semester students (2024–28 Batch) on 21st January 2026 during the Academic Year 2025–26 (Even Semester). The programme, coordinated by Prof. Mutubala, Department of Computer Science & Engineering, aimed to welcome students into the new academic year and familiarize them with the curriculum structure, departmental activities, industry expectations, and pathways for academic and professional growth.

During the session, students were oriented towards the Department Vision and Mission, academic scheme, class timetable, theory courses, laboratory courses, and Skill Enhancement Courses. The programme also covered internal and semester-end evaluation patterns, attendance norms, NBA and NAAC accreditation, and outcome-based education. Emphasis was placed on industry-aligned skills, internships, coding platforms, certifications, placement activities, departmental clubs, the role of the class committee, and effective communication through WhatsApp, Google Mail, and Google Classroom, while reinforcing discipline, ethics, and active participation in departmental activities.


Vision and Mission
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Note : Captured by GPS Map Camera


GPS Map Camera
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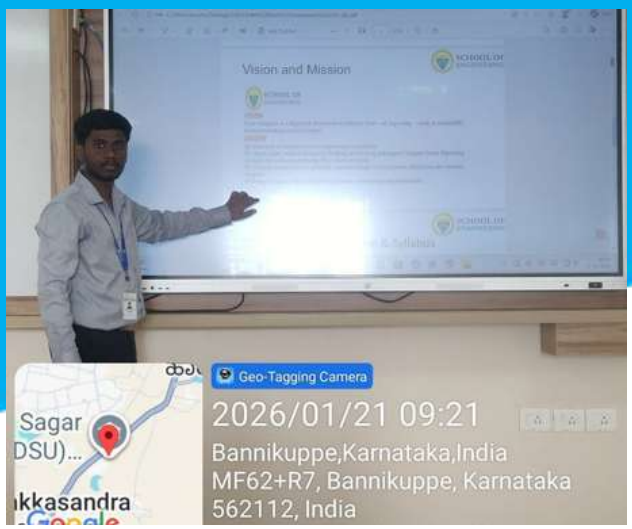
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GPS Map Camera
Bengaluru, Karnataka, India
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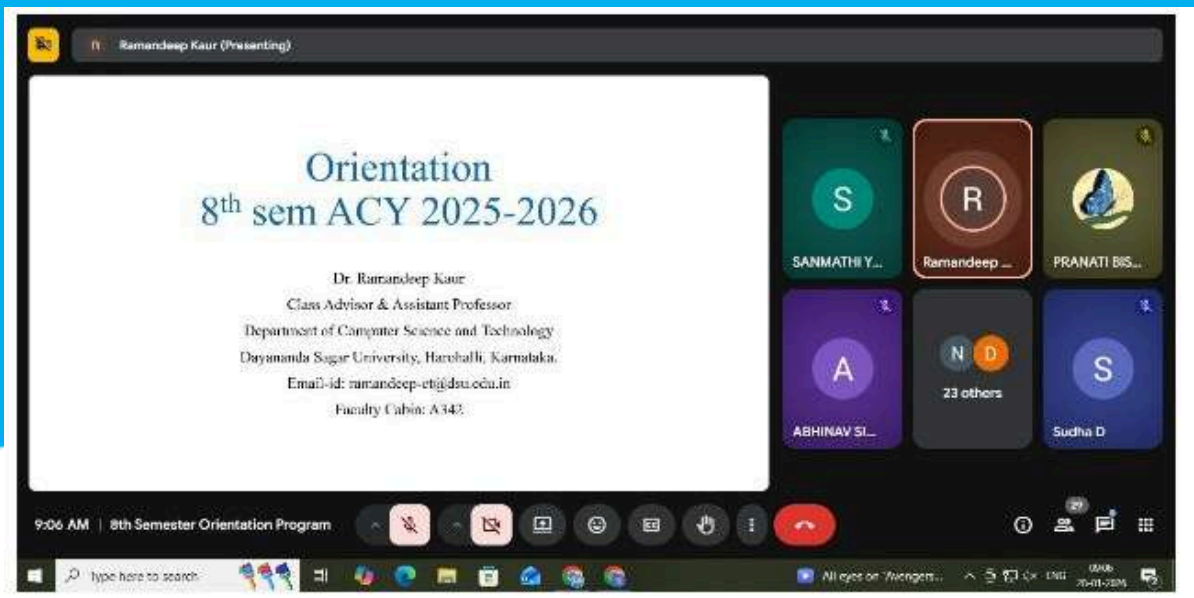
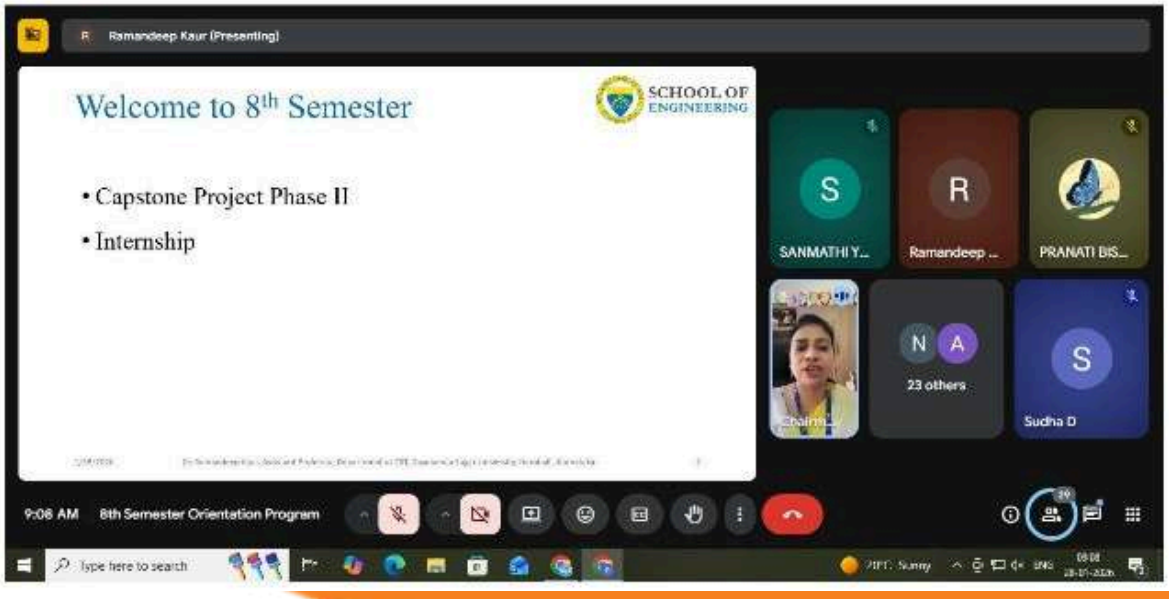
Lat 12.662212° Long 77.450513°
Wednesday, 21/01/2026 08:57 AM GMT +05:30
Google

Orientation Programme for VIII Semester CST Students

The Department of Computer Science & Technology conducted an orientation program for 8th-semester students on 28 January 2026. The program commenced at 9:00 AM with a welcome address by Dr. Ramandeep Kaur, Class Advisor and Assistant Professor, CST, School of Engineering, DSU. This was followed by an address from Dr. M. Shahina Parveen, Chairperson and Professor, CST, School of Engineering, who emphasized the importance of placements, projects, and internships.





SCHOOL OF
ENGINEERING

INDUSTRIAL VISITS/INDUSTRY–INSTITUTE INTERACTION
MoUs

MOU - Dept of Aerospace Engineering DSU and Quest Global Engineering Services PVT LTD.

The Department of Aerospace Engineering DSU and Quest Global Engineering Services Private Limited signed an MoU on 28th Jan 2026, fostering collaboration in engineering education, research, and campus hiring. The partnership aims to establish joint programs, internships, and research projects under the aerospace engineering department, strengthening industrial-academic cooperation.

SCHOOL OF ENGINEERING

FACULTY ACHIEVEMENTS

IEEE Bangalore Section Recognition – AGM 2026

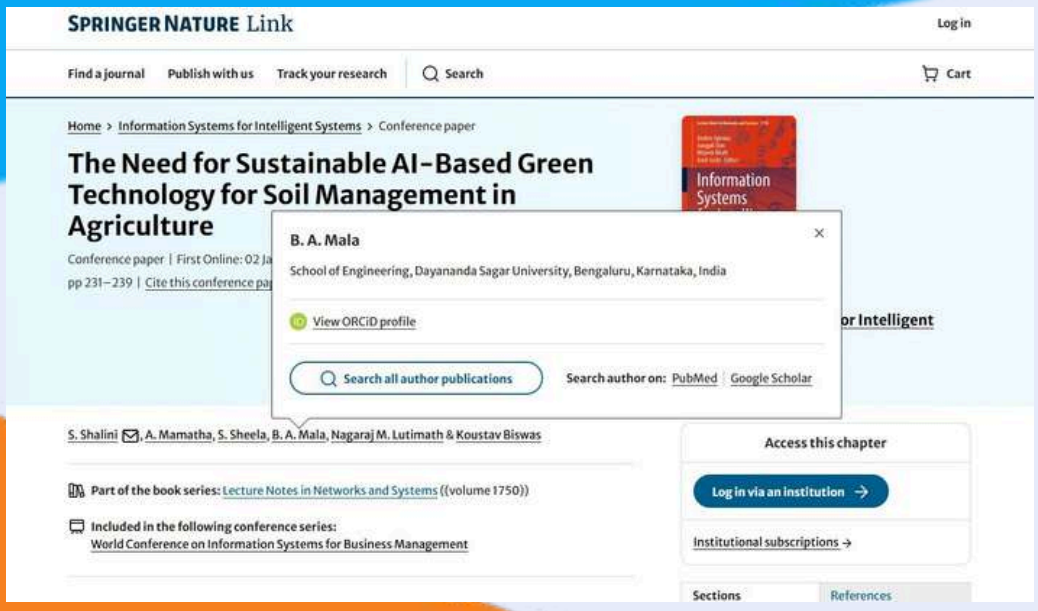
- Dayananda Sagar University, Bengaluru was recognized by the IEEE Bangalore Section during the IEEE Bangalore Section AGM 2026 (Golden Jubilee Year) held on 18 January 2026. The University was ranked among the Top 25 IEEE Student Branches for outstanding contributions to IEEE membership growth and sustained activities, and also emerged as the Winner of the IEEE Bangalore Section Membership Development Committee (MDC) Challenge (1 October–18 November 2025). The recognition reflects the dedicated efforts of IEEE student and professional volunteers of the University.


50 YEARS
Largest Section Globally 2025
#1
ANNUAL GENERAL MEETING
Bengaluru | 18 January 2026 at 3:42 pm


IEEE Bangalore Section
Largest Section Globally (2025)
KNOWLEDGE. RHYTHM. SYSTEMS
"When inner rhythm aligns with outer purpose, innovation finds its flow."
Thank you
IEEE
BANGALORE SECTION
Bengaluru | 18 January 2026 at 10:58 am

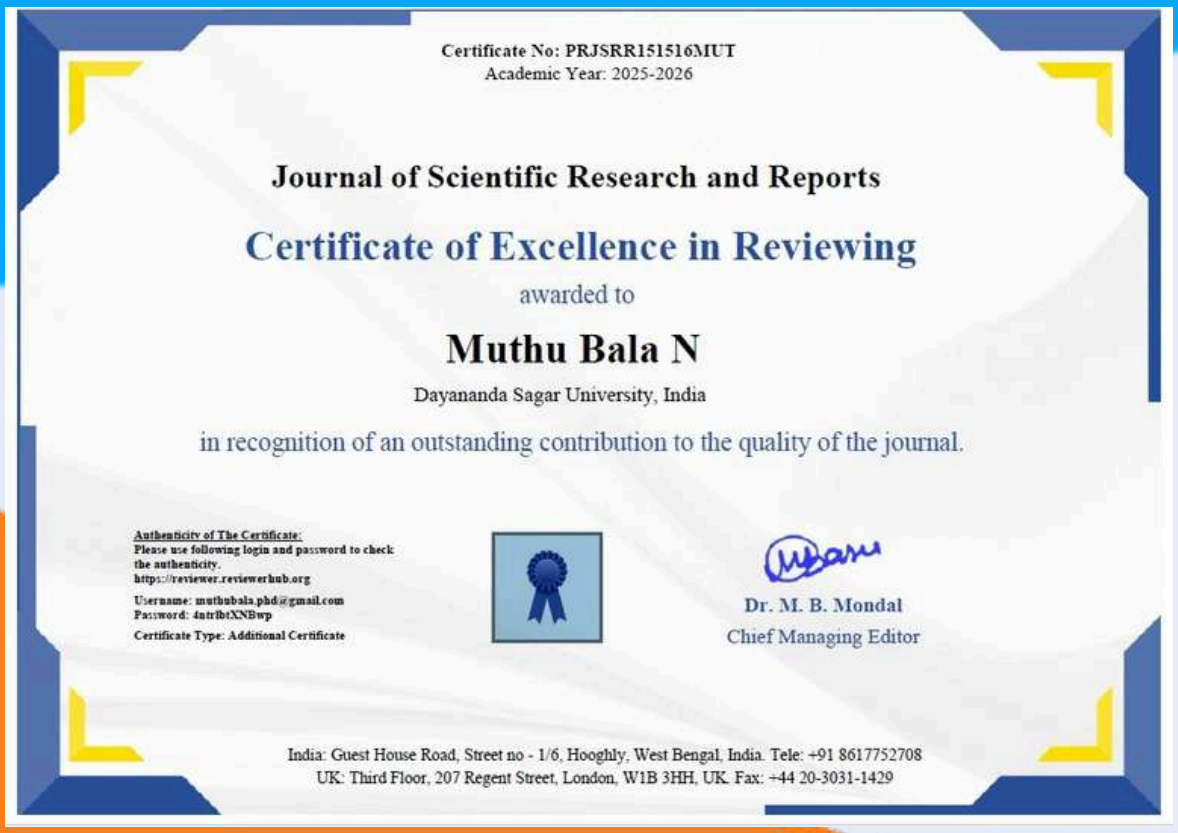
Prof. Mala B A
Assistant Professor
Department of CSE

- Prof. Mala B A, Assistant Professor, Department of CSE published a research paper titled “The Need for Sustainable AI-Based Green Technology for Soil Management in Agriculture” in the Scopus indexed Springer LNNS series “Information Systems for Intelligent Systems” during 02nd January 2026, pp 231–239 https://link.springer.com/chapter/10.1007/978-3-032-12993-2_22.



Prof. Muthu Bala N
Assistant Professor
Department of CSE

- Prof. Muthu Bala N, Assistant Professor, Department of CSE has served as Reviewer for articles in the Journal of Scientific Research and Reports for an outstanding contribution to the quality of the journal during January 2026



Certificate No: PRJSRR151516MUT
Academic Year: 2025-2026

Journal of Scientific Research and Reports

Certificate of Excellence in Reviewing

awarded to

Muthu Bala N

Dayananda Sagar University, India

in recognition of an outstanding contribution to the quality of the journal.

Authenticity of The Certificate:
Please use following login and password to check the authenticity.
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Dr. M. B. Mondal
Chief Managing Editor

India: Guest House Road, Street no - 1/6, Hooghly, West Bengal, India. Tele: +91 8617752708
UK: Third Floor, 207 Regent Street, London, W1B 3HH, UK. Fax: +44 20-3031-1429

Prof. Bharath B
Assistant Professor
Department of CSE

- Prof. Bharath B, Assistant Professor, Department of CSE has presented paper entitled “Serpent -ID: A Deep Learning -Based Mobile Application for Rapid Snake Identification and Bite Management Guidance” in 2026 International Conference on Smart Futuristic Technology (ICSFT) during 02nd to 3rd January 2026.

2026 International Conference on Smart Futuristic Technology (ICSFT)

IEEE BANGALORE SECTION

2nd – 3rd January, 2026

Certificate

This is to certify that Dr./Prof./Mr./Ms. Bharath B has presented paper entitled Serpent-ID: A Deep Learning-Based Mobile Application for Rapid Snake Identification and Bite Management Guidance in 2026 International Conference on Smart Futuristic Technology (ICSFT) during 02nd to 3rd January 2026.

Dr. N S Kumar
General Chair

Dr. Dilshad Begum
Organizing Chair

Dr. Revathi V
Associate Professor & Associate Chair
Department of CSE

- Dr. Revathi V, Associate Professor, Department of CSE, Served as reviewer in 4th IEEE International Conference on " Intelligent and Innovative Technologies in Computing, Electrical and Electronics" organized by Department of Electronics and Communication Engineering and Department of nd rd Electrical and Electronics Engineering, BNMIT Bengaluru during 22nd & 23rd January 2026.

B. N. M. Institute of Technology

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IEEE IEEE BANGALORE SECTION

Certificate

Dr. Revathi Vaithiyanathan of

Dayananda Sagar University has reviewed papers in the

4th IEEE International Conference on " Intelligent and Innovative Technologies in Computing, Electrical and Electronics" organized by Department of Electronics and Communication Engineering and Department of Electrical and Electronics Engineering, BNMIT Bengaluru during 22nd & 23rd January 2026.

Dr. Yasha Jyothi M. Shirur — General Chair, ITCEE

Dr. Venkatesha K — General Chair, ITCEE

Dr. Krishnamurthy G. N. — Deputy Director

Dr. S. Y. Kulkarni — Additional Director & Principal

Prof. T. J. Ramamurthy — Director

Dr. Revathi V
Associate Professor & Associate Chair
Department of CSE

Dr. George Fernandez I
Associate Professor
Department of CSE

- Dr. Revathi V, and Dr. George Fernandez I, Associate Professors, Department of CSE, received a token of appreciation for their outstanding service at the IEEE SESSION CHAIR Technical Sponsored 5th International Conference on the Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES -2026) held at St. Joseph's Institute of Technology (Autonomous), Chennai, Tamil Nadu, India on 29th & 30th , January 2026.

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OMR, CHENNAI - 119

5th International Conference on
Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES 2026)
29th - 30th January, 2026

CERTIFICATE

This certificate is presented to

Dr. Revathi V
Associate Chair,
Department of CSE,
Dayananda Sagar University
Bengaluru, India.

Session Chair

as a token of appreciation for his outstanding service as SESSION CHAIR at the IEEE Technical Sponsored 5th International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES -2026) held at St. Joseph's Institute of Technology (Autonomous), Chennai, Tamil Nadu, India on 29th & 30th, January 2026.

Dr. K. Vijayakumar, Conference Chair
Dr. G. Sreekumar, Convener
Dr. S. Arivazhagan, General Chair

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29th - 30th January, 2026

CERTIFICATE

This certificate is presented to

Dr. George Fernandez I
Associate Professor, Department of CSE,
SoE, DayanandaSagar University,
Harohalli, Kanakapura Road, Ramanagara,
Karnataka 562112, India.

Session Chair

as a token of appreciation for his outstanding service as SESSION CHAIR at the IEEE Technical Sponsored 5th International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES -2026) held at St. Joseph's Institute of Technology (Autonomous), Chennai, Tamil Nadu, India on 29th & 30th, January 2026.

Dr. K. Vijayakumar, Conference Chair
Dr. G. Sreekumar, Convener
Dr. S. Arivazhagan, General Chair

ICSES 2026

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Dr. Bipin Kumar Rai
Professor & Associate Chair
Department of CSE

- Dr. Bipin Kumar Rai, Professor, Department of CSE, Served as a valuable contribution as a TPC member of the 7th International Conference on Soft Computing and its Engineering Applications (icSoftComp2025) organized by Charotar University of Science & Technology (CHARUSAT),Changa, India held at Hanoi, Vietnam, from December 09–11, 2025.

Springer CCIS icSoftComp2025 CHARUSAT

CERTIFICATE OF APPRECIATION

Gratefully presented to Mr./Ms./Mrs./Dr./Prof.

Dr. Bipin Kumar Rai

In recognition of valuable contributions as a TPC Member to the

Seventh International Conference on
Soft Computing and Its Engineering Applications
organized by Charotar University of Science & Technology (CHARUSAT),
Changa, India
Held at Hanoi, Vietnam, from December 09-11, 2025

Dr. Atul Patel
(General Chair)

Dr. K. K. Patel
(Technical Program Chair)

Dr. Natarajan Venkateswaran
Professor of Practice
Department of CSE

- Dr. Natarajan Venkateswaran, Professor of Practice, Department of CSE Successfully completed the prestigious Reliance Foundation PG Scholarship interviews as an Invited Panelist during January 2026.

Results Announced - Reliance Foundation Postgraduate Scholarships

S Sneha.Dolas@reliancefoundation.org
To: RF.PGScholarships@reliancefoundation.org
Cc: Sneha.Dolas@reliancefoundation.org
Fri 1/2/2026 1:01 PM

Dear Panelists,

Wishing you and your loved ones a happy, healthy, and prosperous New Year.

We would like to sincerely thank you for your valuable time and contribution as a panellist for the Reliance Foundation Postgraduate interview process. Your insights and expertise played a crucial role in ensuring a fair and rigorous evaluation process. We truly appreciate your support and commitment.

We are pleased to let you know that the 100 Reliance Foundation Postgraduate Scholars for the year 2025-2026 was announced on 28th December 2025.

The selected students have all received notification of their award. We have awarded the scholarships, based on panelists' ranking and by carefully reviewing all panelist recommendations and comments.

Selected scholars represent 53 of the country's top science and engineering institutes across 18 states across India. Among the selected scholars, 44% come from economically weaker backgrounds and 33% are women and one is a specially abled student.

We would also be grateful if you could share any feedback or suggestions regarding the process. Your inputs will help us further strengthen and improve future engagements. https://zfrmz.in/WfpMIrNJLFnYueH7Cs3s

As you know, the scholarship will go beyond financial, and will aim to nurture scholars to enable them to reach their full potential through extra benefits that include engagement and development opportunities, and a strong alumni network. We will be putting together lecture series, workshops, and mentoring opportunities for scholars, and would be thrilled to have you on-board for any of the pieces. Particularly, if you would be interested in leading a development soft-skills or subject related workshop, please let us know.

Dr. George Fernandez I
Associate Professor
Department of CSE

Dr. Benaka Santhosha S
Assistant Professor
Department of CSE

Prof. Kavyashree I Pattan
Assistant Professor
Department of CSE

- Dr. George Fernandez I, Associate Professor, Dr. Benaka Santhosha S, Prof. Kavyashree I Pattan, Assistant Professors, Dept. of CSE, are Successfully presented the research paper entitled “A Time-Efficient and Eminently Reliable Image Encryption Scheme for Secured Multimedia Communication” at the 5th International Conference on the Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES -2026) held at St. Joseph’s Institute of Technology (Autonomous), Chennai, Tamil Nadu, India on 29th & 30th , January 2026.

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5th International Conference on
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29th - 30th January, 2026

CERTIFICATE

ICSES 674
Peer Reviewed

This certificate is presented to

Dr. George Fernandez
Associate Professor, Dept. of CSE,
Dayananda Sagar University,
Bengaluru South,
Karnataka, India.

for presenting the research paper entitled "**A Time-Efficient and Eminently Reliable Image Encryption Scheme for Secured Multimedia Communication**" at the IEEE Technical sponsored 2026 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES 2026) held at St. Joseph's Institute of Technology (Autonomous), Chennai, Tamil Nadu, India on 29th & 30th, January 2026.

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29th - 30th January, 2026

CERTIFICATE

ICSES 674
Peer Reviewed

This certificate is presented to

Dr. Benaka Santhosha S
Assistant Professor, Dept. of CSE,
Dayananda Sagar University,
Bengaluru South, Karnataka,
India.

for presenting the research paper entitled "**A Time-Efficient and Eminently Reliable Image Encryption Scheme for Secured Multimedia Communication**" at the IEEE Technical sponsored 2026 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES 2026) held at St. Joseph's Institute of Technology (Autonomous), Chennai, Tamil Nadu, India on 29th & 30th, January 2026.

Dr. K. Vijayakumar, Conference Chair
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Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES 2026)

29th - 30th January, 2026

CERTIFICATE

ICSES 674

Peer Reviewed

This certificate is presented to

Kavyashree I Pattan
Assistant Professor, Dept. of CSE,
Dayananda Sagar University,
Bengaluru South,
Karnataka, India.

for presenting the research paper entitled "**A Time-Efficient and Eminently Reliable Image Encryption Scheme for Secured Multimedia Communication**" at the IEEE Technical sponsored 2026 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES 2026) held at St. Joseph's Institute of Technology (Autonomous), Chennai, Tamil Nadu, India on 29th & 30th, January 2026.

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General Chair

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32

Dr. Vengatesan Krishnasamy
Professor
Department of CSE

Dr. Rupam Bhagawati
Associate Professor
Department of CSE

- Dr. K Vengatesan, Professor, and Dr. Rupam Bhagawati, Associate Professor, Department of CSE has successfully presented the paper titled “Deep NeuralNetwork-Based Retail Business Analysis Using AI for Smart Environments and IoT” at the International Conference on AI-Driven Smart Systems and Ubiquitous Computing (ICAUC 2026) organised by Shinawatra University, Thailand in association with S.E.A College of Engineering and Technology, Bengaluru, Karnataka, India during 19-21, January 2026.

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IEEE Systems Council

CERTIFICATE OF PRESENTATION

This is to certify that

K Vengatesan

has successfully presented the paper titled

Deep Neural Network-Based Retail Business Analysis Using AI for Smart Environments and IoT

at the International Conference on AI-Driven Smart Systems and Ubiquitous Computing (ICAUC 2026) organised by Shinawatra University, Thailand in association with S.E.A College of Engineering and Technology, Bengaluru, Karnataka, India during 19-21, January 2026.

Session Chair

Dr. Pratikshya Bhandari
Organising Chair

Dr. Usha Desai
Conference Chair

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This is to certify that

Rupam Bhagawati

has successfully presented the paper titled

Deep Neural Network-Based Retail Business Analysis Using AI for Smart Environments and IoT

at the International Conference on AI-Driven Smart Systems and Ubiquitous Computing (ICAUC 2026) organised by Shinawatra University, Thailand in association with S.E.A College of Engineering and Technology, Bengaluru, Karnataka, India during 19-21, January 2026.

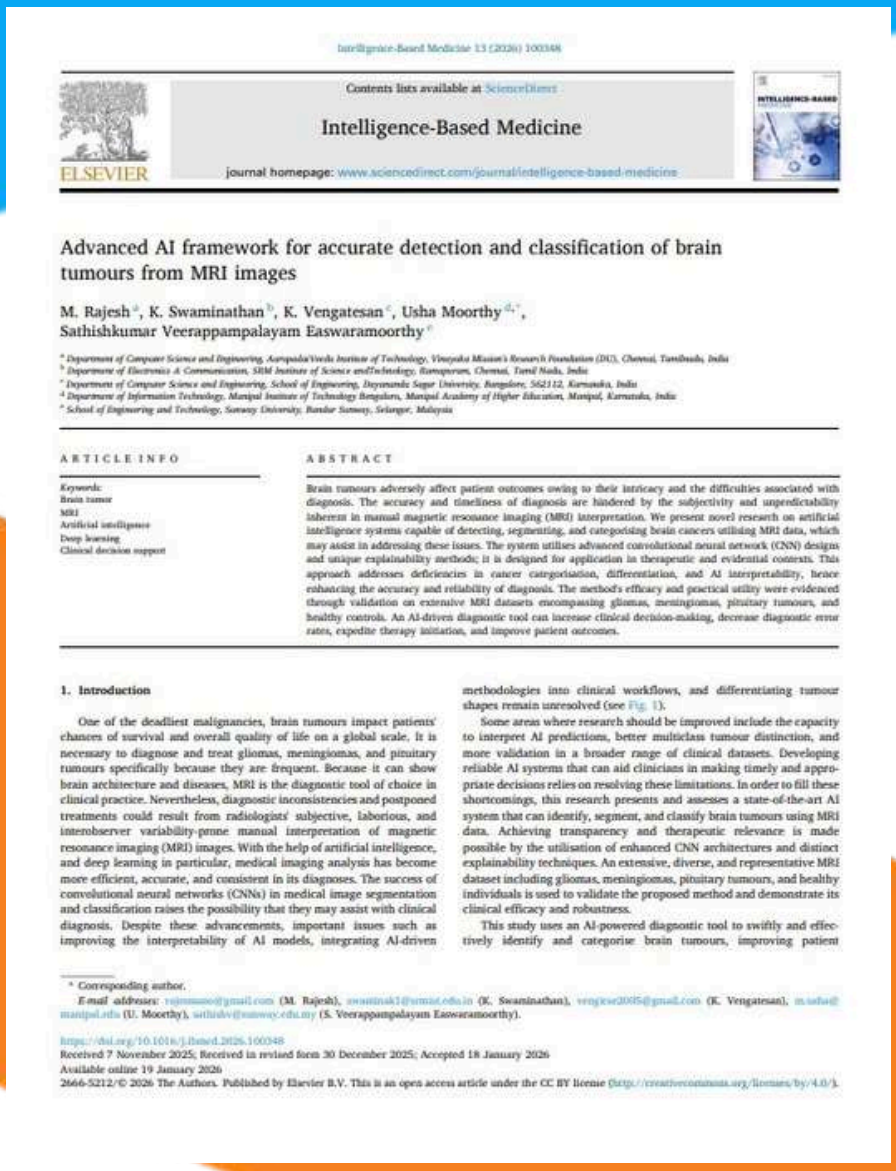
Session Chair

Dr. Pratikshya Bhandari
Organising Chair

Dr. Usha Desai
Conference Chair

Dr. Vengatesan Krishnasamy
Professor
Department of CSE

- Dr. K. Vengatesan, Professor, Department of CSE has successfully published a paper titled: “Advanced AI Framework for Accurate Detection and Classification of Brain Tumours from MRI Images” at Intelligence-Based Medicine (Elsevier) Q2 Journal, Volume 13, Impact Score 3.30, with ISSN 26665212 during January 2026.
DOI: https://doi.org/10.1016/j.ibmed.2026.100348



Intelligence-Based Medicine 13 (2026) 100348

Contents lists available at ScienceDirect

Intelligence-Based Medicine

journal homepage: www.sciencedirect.com/journal/intelligence-based-medicine

Advanced AI framework for accurate detection and classification of brain tumours from MRI images

M. Rajesh [a], K. Swaminathan [b], K. Vengatesan [c], Usha Moorthy [d,*], Sathishkumar Veerappampalayam Easwaramoorthy [e]

[a] Department of Computer Science and Engineering, Aarupadai Veedu Institute of Technology, Vinayaka Mission's Research Foundation (DU), Chennai, Tamilnadu, India
[b] Department of Electronics & Communication, SRM Institute of Science and Technology, Ramapuram, Chennai, Tamil Nadu, India
[c] Department of Computer Science and Engineering, School of Engineering, Dayananda Sagar University, Bangalore, 562112, Karnataka, India
[d] Department of Information Technology, Manipal Institute of Technology Bengaluru, Manipal Academy of Higher Education, Manipal, Karnataka, India
[e] School of Engineering and Technology, Sunway University, Bandar Sunway, Selangor, Malaysia

ARTICLE INFO

Keywords:
Brain tumor
MRI
Artificial intelligence
Deep learning
Clinical decision support

ABSTRACT

Brain tumours adversely affect patient outcomes owing to their intricacy and the difficulties associated with diagnosis. The accuracy and timeliness of diagnosis are hindered by the subjectivity and unpredictability inherent in manual magnetic resonance imaging (MRI) interpretation. We present novel research on artificial intelligence systems capable of detecting, segmenting, and categorising brain cancers utilising MRI data, which may assist in addressing these issues. The system utilises advanced convolutional neural network (CNN) designs and unique explainability methods; it is designed for application in therapeutic and evidential contexts. This approach addresses deficiencies in cancer categorisation, differentiation, and AI interpretability, hence enhancing the accuracy and reliability of diagnosis. The method's efficacy and practical utility were evidenced through validation on extensive MRI datasets encompassing gliomas, meningiomas, pituitary tumours, and healthy controls. An AI-driven diagnostic tool can increase clinical decision-making, decrease diagnostic error rates, expedite therapy initiation, and improve patient outcomes.

1. Introduction

One of the deadliest malignancies, brain tumours impact patients' chances of survival and overall quality of life on a global scale. It is necessary to diagnose and treat gliomas, meningiomas, and pituitary tumours specifically because they are frequent. Because it can show brain architecture and diseases, MRI is the diagnostic tool of choice in clinical practice. Nevertheless, diagnostic inconsistencies and postponed treatments could result from radiologists' subjective, laborious, and interobserver variability-prone manual interpretation of magnetic resonance imaging (MRI) images. With the help of artificial intelligence, and deep learning in particular, medical imaging analysis has become more efficient, accurate, and consistent in its diagnoses. The success of convolutional neural networks (CNNs) in medical image segmentation and classification raises the possibility that they may assist with clinical diagnosis. Despite these advancements, important issues such as improving the interpretability of AI models, integrating AI-driven methodologies into clinical workflows, and differentiating tumour shapes remain unresolved (see Fig. 1).

Some areas where research should be improved include the capacity to interpret AI predictions, better multiclass tumour distinction, and more validation in a broader range of clinical datasets. Developing reliable AI systems that can aid clinicians in making timely and appropriate decisions relies on resolving these limitations. In order to fill these shortcomings, this research presents and assesses a state-of-the-art AI system that can identify, segment, and classify brain tumours using MRI data. Achieving transparency and therapeutic relevance is made possible by the utilisation of enhanced CNN architectures and distinct explainability techniques. An extensive, diverse, and representative MRI dataset including gliomas, meningiomas, pituitary tumours, and healthy individuals is used to validate the proposed method and demonstrate its clinical efficacy and robustness.

This study uses an AI-powered diagnostic tool to swiftly and effectively identify and categorise brain tumours, improving patient

* Corresponding author.
E-mail addresses: rajeshmano@gmail.com (M. Rajesh), swaminak1@srmist.edu.in (K. Swaminathan), vengicse2005@gmail.com (K. Vengatesan), m.usha@manipal.edu (U. Moorthy), sathishkv@sunway.edu.my (S. Veerappampalayam Easwaramoorthy).

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Available online 19 January 2026
2666-5212/© 2026 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

Dr. Praveen Kulkarni
Associate Professor
Department of CSE

Dr. Sivananda Reddy
Associate Professor
Department of CSE

Dr. Renuka Devi M.N
Assistant Professor
Department of CSE

Dr. Pannangi Naresh
Assistant Professor
Department of CSE

- Prof. Shankramma S, Research Scholar, Dr. Praveen Kulkarni, Dr. Sivananda Reddy, Associate Professors, Dr. M N Renukadevi, Dr. Pannangi Naresh, Assistant Professors, Department of CSE has successfully published an Indian patent titled “A Method and System for Blur-Aware Enhancement, Classification,and Adaptive Restoration of Aerial Images” with the applicant name DSU and application No 202641000801 under department of COMPUTER SCIENCE during 16th January 2026.

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/01/2026

(21) Application No.202641000801 A
(43) Publication Date : 16/01/2026

(54) Title of the invention : A Method and System for Blur-Aware Enhancement, Classification, and Adaptive Restoration of Aerial Images

(51) International classification	:G06T 5/00, H04N 5/232, G06K 9/00, G06V 20/13, G06T 5/50	(71)Name of Applicant : 1)Dayananda Sagar University Address of Applicant :1 Shankramma S Dhavalagimath Department of Mathematics, School of Engineering, Dayananda Sagar University, Bangalore South IN Email: shankramma.S-RS-MAT@dsu.edu.in ph:8147229065 Bengaluru South Karnataka India
(31) Priority Document No	:NA	(72)Name of Inventor :
(32) Priority Date	:NA	1)Shankramma S
(33) Name of priority country	:NA	2)Dr. Rajesh T M
(86) International Application No	:	3)Dr.Praveen Kulkarni
Filing Date	:01/01/1900	4)Dr.Shaila S G
(87) International Publication No	: NA	5)Dr.M N Renukadevi
(61) Patent of Addition to Application Number	:NA	6)Dr. Pannangi Naresh
Filing Date	:NA	7)Dr. Santhosh Kumar Jankatti
(62) Divisional to Application Number	:NA	8)Dr. Sivananda Reddy
Filing Date	:NA	

(57) Abstract :

Aerial images taken by unmanned aerial vehicles (UAVs) often suffer from Gaussian, motion, and out-of-focus blur due to atmospheric turbulence, platform motion, defocus, and challenging outdoor illumination conditions. These degradations not only lower the visual quality but also the reliability of subsequent tasks like detection, classification, and monitoring. Standard image enhancement and deblurring methods, which mainly focus on uniform pixel-intensity transformations or single-domain restoration strategies, still have limited capability to cover diverse blur types and real-world variations. To overcome these issues, this work presents a blur-aware comprehensive framework that integrates enhancement, classification, and adaptive restoration strategies to achieve robust aerial image deblurring. First of all, a novel enhancement method that merges the operations of inverse filtering with a median filtering mechanism, which is based on a clockwise route methodology, to noise suppressing while keeping edge structures is proposed. Quantitative evaluation based on PSNR, MSE, RMSE, MAE, SSIM, and entropy indicators support the advances of the introduced technique over standard inverse and hybrid filtering methods. On top of this enhancement module, a hybrid blur classification system is proposed, which utilizes deep feature extractors (ResNet101, VGG-16, EfficientNet-V2, and Vision Transformers) optimized by a Generative Adversarial Network, and then an RBF classifier is used to make the final decision. The results on the VisDrone2019-DET dataset show that the hybrid deep–GAN–RBF architecture achieves the highest performance over the machine learning, deep learning, and standalone models with the classification accuracy of 95.5% for the ViT+GAN-RBF setup. Moreover, a single blur-aware integrated model with the potential of restoration under different conditions of blur is put forward. The model starts with a Multi-Scale Entropy-Aware Blur Classification Network that not only uses spatial entropy cues but also deep CNN features for noise- and illumination-invariant classification. In case of motion-blurred images, the Physics-Inspired Kernel Regression Network feeds on drone motion dynamics to obtain a physically consistent kernel estimation. The process of restoration is then supported by a Blur-Aware Attention-guided Restoration Transformer which can selectively attend to the areas of spatially varying blur; also, a dual-domain Fourier–Wavelet residual fusion scheme is used for texture and structural detail preservation. Besides this a new Hierarchical Blur Impact Index is proposed to concurrently measure perceptual image quality and task-level performance. At the end, a rule-based optimization framework ROBIN (Rule-Based Optimization for Blur Identification and Neutralization) which integrates blur classification with targeted restoration activities is introduced. ROBIN automatically triggers blur-specific restoration strategies such as Total Variation-regularized Wiener filtering for Gaussian blur, Particle Swarm Optimization-assisted Richardson–Lucy deconvolution for motion blur, and Genetic Algorithm-optimized blind deconvolution for out-of-focus blur. The wide-ranging experimental verification attests the steady advantage of the proposal in the PSNR domain (up to 31.2 dB), SSIM (up to 0.92), and entropy for all blur categories. In summary, the implemented system comprises a scalable, robust, and adaptive real-time solution for aerial image enhancement and restoration, thereby, making the system compatible with the UAV-based surveillance, environmental monitoring, and disaster response applications.

No. of Pages : 20 No. of Claims : 10

Prof. Shilpa Sudheendran
Assistant Professor
Department of CSE

- Prof. Shilpa Sudheendran, Assistant Professor, Department of CSE has successfully delivered an oral presentation for the paper entitled “AI based Speech Synthesis and Cloning using Natural Language Processing Models: A Comparative Analysis” at the 6th International Conference on Artificial Intelligence and Smart Energy (ICAIS 2026) JCT College of Engineering and Technology, Coimbatore, India. 29-30, January 2026.

Springer ICAIS JCT College of Engineering and Technology NAAC A

CERTIFICATE OF PRESENTATION

This certificate is awarded to

Shilpa Sudheendran

who has successfully delivered an oral presentation for the paper entitled

AI based Speech Synthesis and Cloning using Natural Language Processing Models: A Comparative Analysis

at the

6th International Conference on Artificial Intelligence and Smart Energy (ICAIS 2026)

JCT College of Engineering and Technology, Coimbatore, India.

29-30, January 2026

Session Chair

Dr B Balraj
Organising Chair

Dr. S. Manoharan
Principal

Dr. Praveen Kulkarni
Assistant Professor
Department of CSE

Prof. Soumadip Mondal
Assistant Professor
Department of CSE

Suhita Biswas
Assistant Professor
Department of CSE

Prof. Sonali Bairagi
Assistant Professor
Department of CSE

Prof. Sweta Chopdar
Assistant Professor
Department of CSE

- Prof. Proloy Biswas, Prof. Soumadip Mondal, Prof. Suhita Biswas, Prof. Sonali Bairagi, Prof. Sweta Chopdar, Assistant Professors, Dept. of CSE, are Successfully published an Indian patent with the title “AI-Driven System for Mapping Cardiovascular Biomarkers to Emotional and Cognitive Health State” and application number 202541123300, applicant name DSU on 2nd January 2026.

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/12/2025

(21) Application No.202541123300 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : AI-Driven System for Mapping Cardiovascular Biomarkers to Emotional and Cognitive Health State

(51) International classification	:A61B 5/00, A61B 5/024, A61B 5/16, G16H 50/30, A61B 5/0205	(71)Name of Applicant : 1)Dayananda Sagar University Address of Applicant :Associate Professor, CST Department, Dayananda Sagar University, Devarakaggalahalli, Harohalli,Kanakapura Road, Bengaluru South, Karnataka 562112 Bengaluru South Karnataka India (72)Name of Inventor : 1)Prof. Proloy Biswas 2)Prof. Soumadip Mondal 3)Prof. Suhita Biswas 4)Prof. Sonali Bairagi 5)Prof. Sweta Chopdar 6)Dr. Santosh Kumar J
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	:01/01/1900	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number Filing Date	:NA :NA	
(62) Divisional to Application Number Filing Date	:NA :NA	

(57) Abstract :
The CardioIntelliBrain Mapping Model (CIBM) is an AI-powered framework designed to assess emotional, cognitive, and psychological well-being using heart rate variability (HRV) and cardiovascular signals. By integrating wearable sensing technologies, advanced signal processing, and a hybrid deep learning architecture, the system extracts meaningful physiological biomarkers linked to autonomic nervous system activity. These biomarkers enable real-time estimation of mental health indicators such as stress levels, emotional stability, cognitive workload, and fatigue. Through continuous, non-invasive monitoring, CIBM supports personalized baseline generation, long-term trend analysis, and adaptive wellness recommendations. Its scalable design enables deployment across telemedicine, workplace wellness, education, sports performance, and general mental health management. By grounding mental health evaluation in objective physiological data, CIBM provides a more accurate, accessible, and proactive alternative to conventional self-reported assessments.

No. of Pages : 15 No. of Claims : 7

Dr. Jayavrinda Vrindavanam V
Professor and Chairperson
Department of CSE (AIML)

Prof. Pradeep Kumar K
Assistant Professor
Department of CSE (AIML)

- The College of Physiotherapy (COPT) and the Department of CSE (AI & ML), School of Engineering, Dayananda Sagar University, successfully collaborated on a research project titled “Machine Learning Based Gait Abnormality Analysis Using a Novel Cost-Effective Smart Device.” The work has been published in the E-Souvenir of the 11th International Conference of Physical Therapy (INCPT AIIMS 2025), held at the All-India Institute of Medical Sciences (AIIMS), New Delhi. The main conference took place on 13–14 December 2025, during which the collaborative research was featured in the official E-Souvenir of the event. Representing Dayananda Sagar University, Dr. Sathya Guruprasad, Principal, COPT, DSU, presented the work in offline mode at the conference on 13 December 2025. The faculty members involved in this interdisciplinary collaboration are: Dr. Sathya Guruprasad, Principal, College of Physiotherapy (COPT), DSU, Dr. Sai Bhavani, Assistant Professor, COPT, DSU, Dr. Jayavrinda Vrindavanam, Professor & Chairperson, Department of CSE (AI & ML), School of Engineering, DSU, Prof. Pradeep Kumar K, Assistant Professor, Department of CSE (AI & ML), School of Engineering, DSU. This achievement highlights the strong interdisciplinary collaboration between Physiotherapy and CSE (AI & ML) at Dayananda Sagar University and reflects the institution’s growing contribution to innovation in AI-assisted gait analysis and rehabilitation technologies.

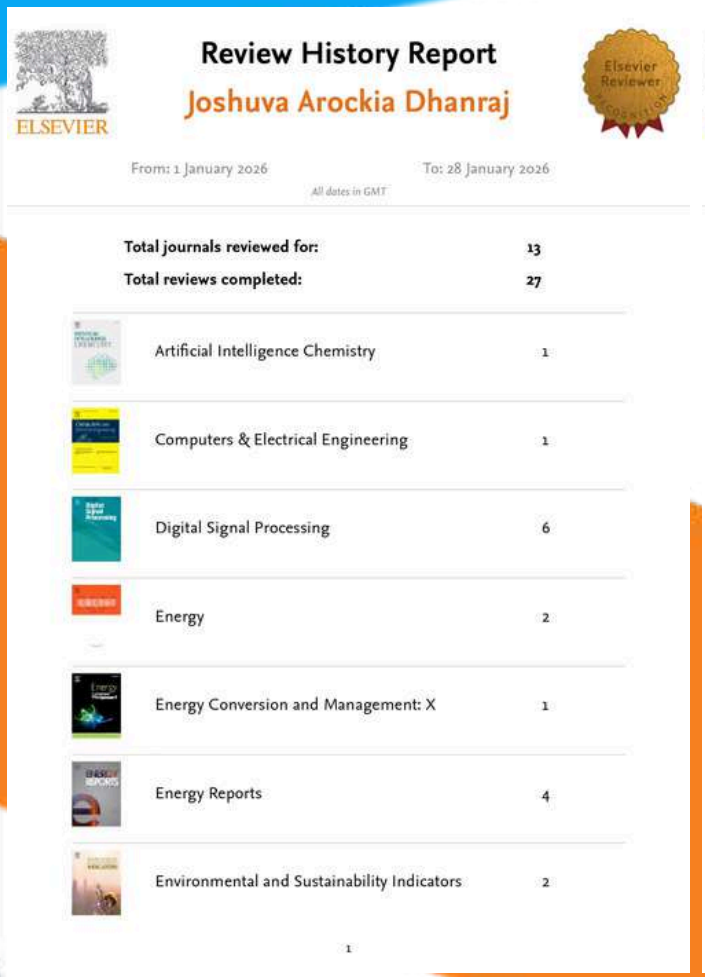
MACHINE LEARNING-BASED GAIT ABNORMALITY ANALYSIS USING A NOVEL COST-EFFECTIVE SMART DEVICE

Sathya Guruprasad 1, Sai Bhavani 2, Jayavrinda Vrindavanam 3, Pradeep Kumar K 4
1 Principal & Professor, College of Physiotherapy, Dayananda Sagar University, Karnataka
2 Assistant Professor, College of Physiotherapy, Dayananda Sagar University, Karnataka
3 Professor & chairperson, Dept. of CSE(AIandML), Dayananda Sagar University, Karnataka
4 Dept. of CSE(AI&ML), Dayananda Sagar University, Karnataka, India 562112

BACKGROUND: Gait disturbances are crucial signs of neurological and musculoskeletal diseases, having a direct impact on the quality of life and the medical condition of individuals. Classical diagnosis relies on the subjective clinical eye of a practitioner, leading to inter-observer variability, the absence of standardised metrics and lack of scalability in low-resource settings. These limitations preclude early diagnosis and objective follow-up.
OBJECTIVE: Making use of machine learning (ML), and the joint effort between Physiotherapy and CSE (AI and ML) departments, deals with the introduction of a new cost-effective system that is capable of identifying gait abnormalities, which may aid clinicians in treatment for data- driven, precise therapy.
DESCRIPTION OF THE INNOVATION: A simulated dataset of 100 patients was created, and it recorded with the main space time characteristics like step length, step count and centerline deviation. Preprocessing steps included feature scaling, generation of asymmetry indices, and label encoding. A Random Forest classifier, given its flexibility to model sophisticated (non-linear interactions, was fitted on the dataset. Short mathematical analysis indicated ranked feature importance of step length, step count and centerline deviation with cross-validation, which guarantees strong qualities. The model had a global accuracy of ~82% and precision and recall values higher than 75 for major classes, but low performance on underrepresented classes was observed, meaning that it should be trained with larger datasets.
NOVELTY AND ADVANTAGES: The novelty of the approach is in the low-cost, wearable and consumer- grade IMU-based prototype, which allows for real-time gait data acquisition suits. Unlike costly lab-based motion capture systems, this system allows edge computing, enabling portability and privacy while at the same time being inexpensive- a perfect fit for community screenings and routine clinical practice. A fastAPI powered user interface enables the easy input of gait measurements with real-time abnormality prediction.
POTENTIAL APPLICATIONS AND FUTURE SCOPE: Anticipated results are an improved diagnostic accuracy, individual provision plan for rehabilitation and monitoring of the mobility changes in the long-term. The model presents the potential of ML in converting gait between subjective and objective assessments. Once real patient data are available, mine combined sensor use will be adapted to optimise generalisation. This scalable, affordable approach has the potential to enable physiotherapists, neurologists, and rehabilitation clinicians alike to 'follow-the-evidence' in driving provision of equitable care.
KEYWORDS: gait analysis, neurological and musculoskeletal diseases, space-time characteristics, Random Forest, cost-effective design wearable sensors, IMU-based prototype, fastAPI

Dr. Joshuva Arockia Dhanraj
Professor
Department of CSE (AIML)

- Dr. Joshuva Arockia Dhanraj, Professor, CSE (AI & ML) has been recognized for his outstanding contribution as an Elsevier Reviewer through his active involvement in the international peer-review process. In January 2026, he successfully completed 27 manuscript reviews for 13 reputed Elsevier journals, spanning interdisciplinary areas including Artificial Intelligence, Digital Signal Processing, Energy Systems, Sustainable Computing, and Engineering Sciences. This accomplishment highlights his strong research acumen, academic integrity, and dedication to maintaining high standards of scholarly publishing, thereby bringing significant recognition to the institution.



ELSEVIER

Review History Report

Joshuva Arockia Dhanraj

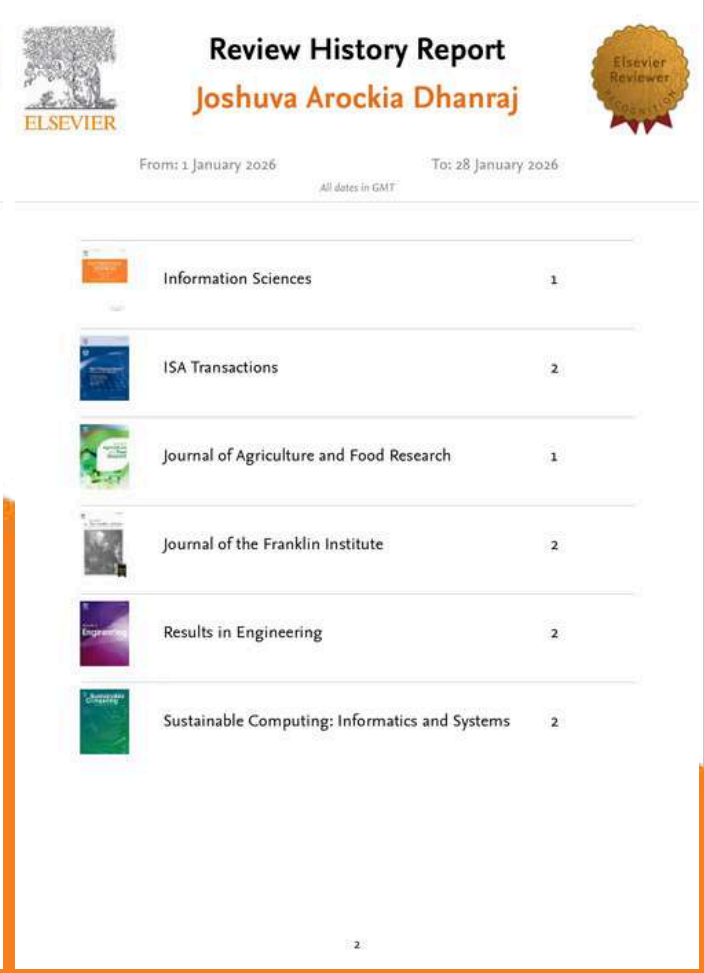
Elsevier Reviewer Recognition

From: 1 January 2026 To: 28 January 2026

All dates in GMT

Total journals reviewed for:	**13**
Total reviews completed:	**27**
Artificial Intelligence Chemistry	1
Computers & Electrical Engineering	1
Digital Signal Processing	6
Energy	2
Energy Conversion and Management: X	1
Energy Reports	4
Environmental and Sustainability Indicators	2

1



ELSEVIER

Review History Report

Joshuva Arockia Dhanraj

Elsevier Reviewer Recognition

From: 1 January 2026 To: 28 January 2026

All dates in GMT

Information Sciences	1
ISA Transactions	2
Journal of Agriculture and Food Research	1
Journal of the Franklin Institute	2
Results in Engineering	2
Sustainable Computing: Informatics and Systems	2

2

Dr. Joshuva Arockia Dhanraj
Professor
Department of CSE (AIML)

- Dr. Joshuva Arockia Dhanraj, Professor, CSE (AI & ML) successfully completed the AICTE Training and Learning (ATAL) Academy Faculty Development Program on “Capacity Building for Wellbeing and Resilience in Higher Education,” organized by the National Institute of Technology Warangal from 19–24 January 2026. Conducted under the aegis of the All-India Council for Technical Education (AICTE), the program focused on enhancing faculty competencies in fostering wellbeing, resilience, and sustainable academic practices in higher education. This achievement reflects Dr. Joshuva’s commitment to continuous professional development and academic excellence.

ATAL/2026/1768558760

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Nelson Mandela Marg, Vasant Kunj, New Delhi -110070

AICTE Training and Learning (ATAL) Academy

Certificate

It is certified that ***Dr. A. Joshuva, Professor*** *of* ***Dayananda Sagar University*** *has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on* ***Capacity Building for Wellbeing and Resilience in Higher Education*** *at* ***National Institute of Technology Warangal*** *from* ***19/01/2026*** *to* ***24/01/2026.***

Priyanka Chawla
Associate Professor Level (AICTE Institute), Coordinator
National Institute of Technology Warangal

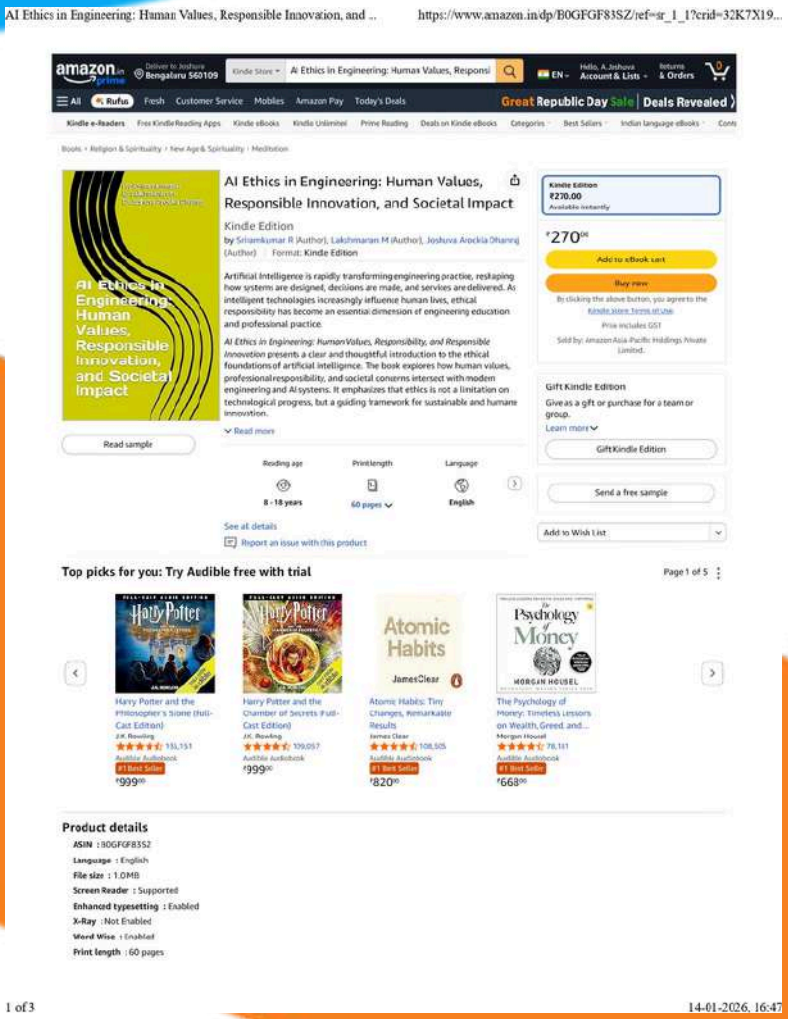
Dr. Sunil Luthra
Director & Bureau Head
Training and Learning Bureau, AICTE

Dr. Joshuva Arockia Dhanraj
Professor
Department of CSE (AIML)

- Dr. Joshuva Arockia Dhanraj, Professor, CSE (AI & ML) has been recognized by Springer Nature for his valuable contribution as a peer reviewer. In January 2026, he reviewed a manuscript for the journal Discover Applied Sciences, demonstrating his expertise and commitment to upholding high standards of scholarly rigor and ethical research dissemination. This recognition highlights his active engagement with the global research community and his continued service to quality academic publishing.

Dr. Joshuva Arockia Dhanraj
Professor
Department of CSE (AIML)

- Dr. Joshuva Arockia Dhanraj, Professor, CSE (AI&ML) is a co-author of the recently published book AI Ethics in Engineering: Human Values, Responsible Innovation, and Societal Impact, now available on Amazon (Kindle Edition). The book offers a concise and insightful examination of ethical principles in artificial intelligence, with a strong focus on human values, responsible innovation, and the societal implications of contemporary engineering practices. This publication underscores Dr. Joshuva's interdisciplinary scholarship and his commitment to embedding ethics and responsibility within engineering education and AI-driven technologies.



Dr. Sumant Kumar Mohapatra
Associate Professor
Department of CSE (AIML)

- Dr. Sumant Kumar Mohapatra, Associate Professor, CSE (AI & ML) served as a peer reviewer for the journal BMC Medical Informatics and Decision Making in 2026 and was awarded a Reviewer Certificate in recognition of his valuable contribution. This acknowledgment highlights his active engagement in the scholarly peer-review process and his commitment to upholding high standards of research quality and academic excellence.

Dr. Sumant Kumar Mohapatra
Associate Professor
Department of CSE (AIML)

- Dr. Sumant Kumar Mohapatra, Associate Professor, CSE (AI & ML) participated in a five-day online Faculty Development Programme (FDP) titled “Advances in AI for Healthcare,” held from 5th to 9th January 2026 and organized by the Department of AI and Data Science, CHRIST (Deemed to be) University, Kengeri Campus, Bengaluru. The programme emphasized recent advancements, research trends, and practical applications of Artificial Intelligence in healthcare, contributing to the enhancement of academic and research competencies in this rapidly evolving interdisciplinary field.

Christ (Deemed to be) University
Department of AI & Data Science

CHRIST

This is to certify that

Dr. Sumant Kumar Mohapatra

from

Dayananda Sagar University

has participated in the **FIVE DAYS ONLINE FACULTY DEVELOPMENT PROGRAMME** on **“ADVANCES IN AI FOR HEALTHCARE”** from 5th to 9th January 2026, organised by the Department of AI and Data Science, Christ (Deemed to be) University, Kengeri Campus, Bangalore.

Dr. Michael Moses T,
Head of Department

Dr. Mary Anita E A,
Associate Dean

Dr. Mude Nagarjuna Naik
Associate Professor
Department of CSE (AIML)

- Dr. Mude Nagarjuna Naik, Associate Professor, CSE (AI & ML), presented a research paper titled “Automated Deep Learning Framework for Multi-Label Skin Cancer Classification Using Balanced Dermatoscopic Data” at the Sixth International Conference on Advances in Electrical, Computing, Communications and Sustainable Technologies (ICAECT 2026). The conference was held in hybrid mode at Shankaracharya Technical Campus (SSTC), Bhilai, Chhattisgarh, India, during 08–09 January 2026.

2026 Sixth IEEE Sponsored International Conference on

Advances in Electrical, Computing, Communications and Sustainable Technologies (ICAECT 2026)

08 - 09, January 2026 | Bhilai, Chhattisgarh, India | www.icaect.com

CERTIFICATE

Sponsored by IEEE Advancing Technology for Humanity

26CHCS 1160
Peer Reviewed

This certificate is presented to

Mude Nagarjuna Naik
Department of CSE (AI & ML)
School of Engineering, Dayananda Sagar University
Devarakaggalahalli, Harohalli, Kanakapura Road,
Bengaluru South District, Bengaluru – 562112, Karnataka, India

for presenting the research paper entitled “Automated Deep Learning Framework for Multi-Label Skin Cancer Classification Using Balanced Dermatoscopic Data ” in the 2026 Sixth International Conference on Advances in Electrical, Computing, Communications and Sustainable Technologies (ICAECT 2026) held at Shankaracharya Technical Campus (SSTC), Bhilai, Chhattisgarh, India during 08 - 09, January 2026. The conference has been organized in HYBRID MODE.

Dr. Shimpy Ralhan, Conference Chair
Dr. P. B. Deshmukh, General Chair
Ms. Jaya Mishra, President, SGES

Organized by
Shri Shankaracharya Technical Campus
Bhilai, Chhattisgarh, INDIA

Dr. M. Lakshmanan
Assistant Professor
Department of CSE (AIML)

Prof. R. Sriramkumar
Assistant Professor
Department of CSE (AIML)

Dr. Jayavrinda Vrindavanam V
Professor and Chairperson
Department of CSE (AIML)

Dr. Joshuva Arockia Dhanraj
Professor
Department of CSE (AIML)

Dr. Mude Nagarjuna Naik
Associate Professor
Department of CSE (AIML)

A patent titled “System and Method for Dual-Site Multimodal Workplace Wellness Monitoring” has been successfully published in the Official Journal of the Patent Office, Government of India (Issue No. 03/2026, dated 16 January 2026). The invention, filed by Dayananda Sagar University, Bengaluru, presents an innovative workplace wellness monitoring system that combines an acoustic–thermal smart badge and a biometric desk-mat to capture physiological, environmental, and micro-movement data in real time. Designed with on-device processing and privacy-preserving features, the system enables passive and continuous wellness awareness without medical diagnosis or constant cloud connectivity.

The patent was developed by Dr. M. Lakshmanan, Prof. Sriramkumar R, Dr. Jayavrinda V. Vadakkeparambil, Dr. Joshuva Arockia Dhanraj, Dr. Godhandaraman T, and Dr. Mude Nagarjuna Naik, reflecting the institution’s strong focus on impactful research and technological innovation.

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :26/12/2025

(21) Application No.202541131916 A

(43) Publication Date : 16/01/2026

(54) Title of the invention : System and Method for Dual-Site Multimodal Workplace Wellness Monitoring

(51) International classification	:A61B 5/00, A61B 5/01, A61B 5/0205, A61B 5/11, G06K 9/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(72)**Name of Inventor :**
1)M Lakshmanan
2)Sriramkumar R
3)Jayavrinda V Vadakkeparambil
4)Joshuva Arockia Dhanraj
5)Godhandaraman T
6)Mude Nagarjuna Naik

(57) Abstract :
The invention discloses an adaptive dual-site multimodal workplace wellness monitoring system comprising an acoustic–thermal smart badge and a desk-mat biometric sensor module configured to cooperatively acquire physiological, acoustic, thermal, motion, micromovement, and environmental data during routine workplace activity. The smart badge captures upper-body and environmental parameters using a microphone array, non-contact thermal sensor, inertial measurement unit, and air-quality sensors, while the desk-mat captures wrist-level physiological and micro-movement signals using photo plethysmography, galvanic skin response, thermal contact sensing, and micro-movement detection. Distributed embedded microcontrollers perform local signal preprocessing, feature extraction, and timestamp synchronization, and an embedded multimodal fusion engine integrates heterogeneous sensor features without reliance on continuous cloud connectivity. A personalized rolling baseline learning engine computes statistical deviation using Z-score analysis or Mahalanobis distance to generate a non-diagnostic Wellness Deviation Index on a normalized scale. The system operates passively and in real time, preserves privacy through on-device computation, and supports workplace wellness awareness without medical diagnosis

No. of Pages : 22 No. of Claims : 10

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Assistant Professor
Department of CSE (AIML)

Dr. Vegi Fernando A
Associate Professor
Department of CSE (AIML)

Dr. Joshuva Arockia Dhanraj
Professor
Department of CSE (AIML)

The research paper titled “Nanosatellite and IoT-Enabled Climate–NDVI Data Fusion for Accurate Wheat Yield Prediction”, authored by Dr. M. Lakshmanan, Dr. R. Tamilamuthan, Dr. Vegi Fernando A, Prof. Sriramkumar R, Dr. Godhandaraman T, and Dr. Joshuva Arockia Dhanraj, was presented at the 10th International Conference on Communication and Electronics Systems (ICCES-2025) and subsequently published in the IEEE conference proceedings on 21 January 2026. The study proposes an integrated framework that combines nanosatellite communication, IoT-based field sensing, climate variables, and NDVI data to enhance the accuracy of wheat yield prediction. Advanced machine learning models, including LSTM, XGBoost, and regression techniques, were employed to capture temporal and environmental variations, achieving high predictive performance. This work contributes significantly to precision agriculture by enabling data-driven decision support for sustainable farming and improved food security across diverse agro-climatic regions.

Proceedings of the 10th International Conference on Communication and Electronics Systems (ICCES-2025)
IEEE XPlore Part Number: CFP25AWO-ART; ISBN: 979-8-3315-9756-6

Nanosatellite and IoT-Enabled Climate–NDVI Data Fusion for Accurate Wheat Yield Prediction

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2025 10th International Conference on Communication and Electronics Systems (ICCES) | 979-8-3315-9756-6/25/$31.00 ©2025 IEEE | DOI: 10.1109/ICCES67310.2025.11336986

***Abstract*— Accurate wheat yield prediction is essential for sustainable agriculture, food security, and resource optimization. Traditional estimation methods often fail to adapt to climatic variability and complex soil–crop interactions. This study proposes a nanosatellite- and IoT-enabled framework that fuses climatic variables, soil moisture, and NDVI data to improve prediction accuracy. Multi-source datasets from satellite imagery, IoT field sensors, and agricultural statistics were preprocessed and integrated in the MATLAB environment. Principal Component Analysis (PCA), Recursive Feature Elimination (RFE), and SHAP analysis were used to select dominant predictors. Linear Regression, XGBoost, and Long Short-Term Memory (LSTM) models were trained and evaluated using stratified cross-validation with R^2, RMSE, and MAE metrics. The LSTM model achieved the best performance (R^2 = 0.91), demonstrating strong capability to model temporal dependencies. Visualization dashboards and nanosatellite-based communication support real-time monitoring and scalable deployment. The proposed framework provides a reliable decision-support tool for precision agriculture across diverse agro-climatic zones, enabling timely interventions for sustainable wheat production.**

Keywords*— *Wheat Yield Prediction, IoT, Nanosatellite Communication, NDVI, Climate Data Fusion, LSTM, Precision Agriculture, Sustainable Computing.

I. Introduction

Ensuring accurate wheat yield prediction has become increasingly critical for global food security and sustainable agricultural management. Traditional estimation approaches, such as manual surveys and statistical trend models, often fail to capture the nonlinear interactions between climatic variability, soil characteristics, and crop growth, resulting in limited adaptability to dynamic farming environments [1], [2]. With rising climate uncertainties and growing resource constraints, reliable and timely forecasting systems are essential for farmers, agronomists, and policymakers to optimize planning and reduce risks.

Recent advancements in artificial intelligence (AI) and machine learning (ML) have significantly improved the capacity of predictive systems to handle complex, multi-source agricultural datasets [3], [4]. Techniques such as artificial neural networks, ensemble learning, and deep learning models have demonstrated promising results in modeling yield outcomes when combined with meteorological data, soil parameters, and vegetation indices [5], [6]. In parallel, the integration of remote sensing technologies has enhanced spatial and temporal monitoring capabilities. For instance, the Normalized Difference Vegetation Index (NDVI) derived from satellite imagery is widely recognized as a robust indicator of crop health and productivity [7]. Additionally, advances in IoT-enabled sensor networks and nanosatellite communication enable real-time data acquisition and reliable transmission, bridging gaps in conventional monitoring systems [8]. Several studies have highlighted the potential of multi-modal data fusion approaches that combine climate records, remote sensing imagery, and ground-based observations for yield forecasting [9], [10]. However, challenges remain in ensuring system scalability across diverse agro-climatic zones, improving communication reliability for real-time decision support, and enhancing the interpretability of AI models for domain experts.

This research addresses these gaps by proposing an integrated nanosatellite- and IoT-enabled communication framework for wheat yield prediction. By leveraging NDVI and climate data in combination with advanced ML techniques such as XGBoost and Long Short-Term Memory (LSTM) networks, the proposed framework aims to provide accurate, scalable, and actionable predictions that support sustainable precision agriculture. Unlike traditional yield prediction models that rely solely on either ground observations or remote sensing, our framework combines nanosatellite communication for data continuity, IoT-enabled sensing for in-situ validation, and NDVI-based vegetation monitoring. This integration addresses data gaps in real time and improves both spatial and temporal resolution, which is critical for accurate forecasting under climate variability.

II. Literature Review

Crop yield forecasting has evolved from traditional regression and statistical models to modern data-driven approaches powered by artificial intelligence (AI). Early

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Dr. M. Lakshmanan
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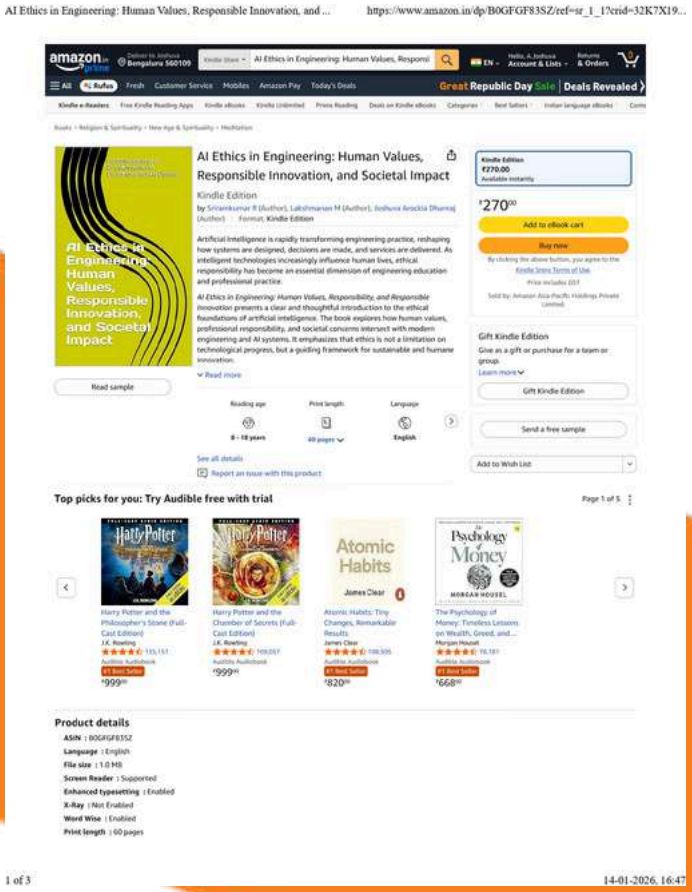
Prof. R. Sriramkumar
Assistant Professor
Department of CSE (AIML)

Dr. Joshuva Arockia Dhanraj
Professor
Department of CSE (AIML)

The book titled “AI Ethics in Engineering: Human Values, Responsible Innovation, and Societal Impact”, authored by Prof. Sriramkumar R, Dr. Lakshmanan M, and Dr. Joshuva Arockia Dhanraj, offers a timely and insightful exploration of ethical considerations in modern engineering and artificial intelligence. Published as a Kindle Edition in January 2026, the book examines how rapidly evolving AI technologies influence human values, professional responsibility, and societal well-being. It emphasizes the importance of responsible innovation by integrating ethical frameworks into engineering design, decision-making, and deployment practices. Written in a clear and accessible manner, the book serves as a valuable resource for students, educators, researchers, and professionals, highlighting the need for sustainable, human-centric, and ethically grounded technological development.



Prof. R. Sriramkumar
Assistant Professor
Department of CSE (AIML)

Dr. M. Lakshmanan
Assistant Professor
Department of CSE (AIML)

The research paper titled “AI-Powered Portable Kit for Early Detection of Lung and Chest Diseases in Rural Areas”, authored by Prof. Sriramkumar R, Dr. Naga Subramanian G, R. Dr. Tamilamuthan, Dr. Suresh Kumar V, Dr. B. T. Geetha, and Dr. M. Lakshmanan, was presented at the 6th International Conference on IoT Based Control Networks and Intelligent Systems (ICICNIS-2025) and subsequently published in the IEEE conference proceedings on 01 January 2026. The work proposes an innovative AI-enabled portable diagnostic system for early detection of pulmonary diseases such as tuberculosis, pneumonia, COPD, and lung cancer, with a strong focus on rural and under-resourced regions. By integrating edge-based deep learning models, offline processing, and privacy-preserving mechanisms, the solution offers a low-cost, real-time diagnostic aid for community health workers. This publication highlights the authors’ contribution to advancing healthcare accessibility through intelligent and socially impactful technological innovation.

Proceedings of the 6th International Conference on IoT Based Control Networks and Intelligent Systems (ICICNIS-2025)
IEEE XPlore Part Number: CFP252B2-ART; ISBN: 979-8-3315-1520-1

2025 6th International Conference on IoT Based Control Networks and Intelligent Systems (ICICNIS) | 979-8-3315-1520-1/25/$31.00 ©2025 IEEE | DOI: 10.1109/ICICNIS66683.2025.11315773

AI-Powered Portable Kit for Early Detection of Lung and Chest Diseases in Rural Areas

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6th M.Lakshmanan
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***Abstract*— Achieving efficient diagnosis of pulmonary conditions in rural and forested areas is faced with a lot of challenges as the access to complex diagnostic facilities is limited. The paper presents a portable diagnostic system, which is AI-enabled, programmed to detect pulmonary pathology in real-time, offline and includes pulmonary tuberculosis (TB), pneumonia, chronic obstructive pulmonary disease (COPD), and lung carcinoma. The platform envisioned is inclusive of a low-cost digital imaging sensor, an edge-AI processing unit, and a mobile-app interface, thus being applicable to implement it in a local clinic and among community health workers. The base AI system is a hybrid Convolutional Neural Network (CNN) and Vision Transformer (ViT) system, and it is run on-the-edge with the use of compressed chest X-ray images or sensor feed. To enhance the interpretability of the model, a lightweight Grad-CAM visualization layer is added to help the non-specialists understand the outcome of the diagnosis. Local storage gives protection to data privacy and an optional blockchain-enabled record-management protocol (which switches on when network connectivity is detected). The use of field-level validation with a simulated dataset produced an average accuracy on classification of 93.7 per cent on a variety of diseases even when hardware conditions were tight. The system is designed to be low-powered, inexpensive and expandable in the rural health care systems. The current application highlights the potential of the combination of artificial intelligence and portable medical equipment to reduce the diagnostic inequalities in under-resourced populations.**

Keywords*— *AI in healthcare, portable diagnostic kit, lung disease detection, rural health, edge computing, deep learning, Vision Transformer.

I. Introduction

Tuberculosis (TB), pneumonia, chronic obstructive pulmonary disease (COPD), and lung cancer are causing a shocking rate of yearly deaths worldwide, making resulting respiratory and pulmonary disorders a significant public-health concern at the global scale. According to the reports drawn by the World Health Organization, most of these incidences occur in the developing nations where there is poor access to proper health care and diagnostic facilities. In India, as well as many other low-income settings, rural and tribal societies tend to utilize small health posts or mobile healthcare services that do not have such imaging modalities, lab-facilities, or even specialist doctors. In turn, diagnostic delays remain one of the major predictors of high case-fatality rates and lengthy treatment periods. More recently, researchers have sought to adopt the use of digital and intelligent technologies as one of the ways through which to strengthen the publichealth systems. Nivethitha et al. [1] have stressed the potential of data-driven tools and automation to transform the world of early disease detection and prevention because of their applicability in enhancing the decision-making process of community health workers. Similarly, Isangula and Haule [2] designed a cough-audio classifier, which specifically works in a rural environment, and can identify respiratory infections using voice samples, which proves that standalone diagnostic solutions can deliver functionality even in the conditions of limited connectivity. Alam and Enam [3] also established that the computation analysis and signal based methods have helped accelerate the respiratory diagnosis by reducing the dependency on the specialist interpretation.

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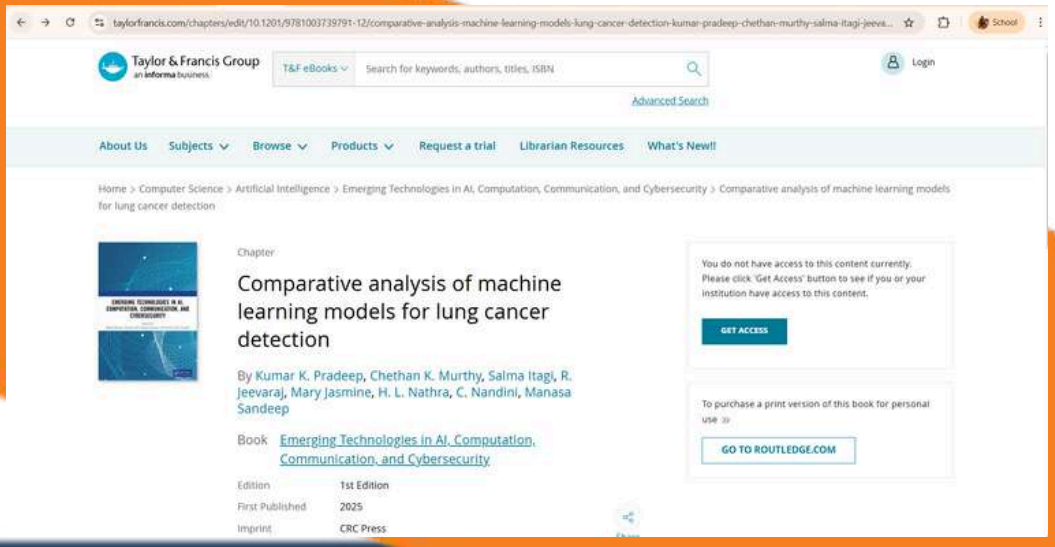
Prof. Pradeep Kumar K
Assistant Professor
Department of CSE (AIML)

A collaborative book chapter authored by faculty members of the Department of CSE (AI & ML), Dayananda Sagar University (DSU), and Dayananda Sagar Academy of Technology and Management (DSATM), Bengaluru, has been published by Taylor & Francis / CRC Press, a reputed international publisher. The publication reflects the strong research culture, academic excellence, and collaborative spirit of the institutions, contributing to advancements in the field of Artificial Intelligence and Machine Learning. The chapter appears in the book titled Emerging Technologies in AI, Computation, Communication, and Cybersecurity (Chapter 12), with the title "Comparative Analysis of Machine Learning Models for Lung Cancer Detection" (DOI: 10.1201/9781003739791). The work represents an inter-campus collaborative research effort between DSU and DSATM, along with contributions from other reputed institutions. The authors of the chapter include Prof. Pradeep Kumar K and Mr. Chethan K Murthy 8th Sem Student from DSU; Dr. Salma Itagi (Sai Vidya Institute of Technology); Prof. Jeevaraj R (Global Academy of Technology); Dr. Mary Jasmine (CHRIST University); and Prof. Nethra H L, Dr. C. Nandini, and Prof. Manasa Sandeep from DSATM. This publication highlights strong inter-campus and inter-institutional research collaboration, enhancing interdisciplinary research, academic visibility, and the international research output of DSU and DSATM.




AICCoNS
Artificial Intelligence, Computation, Communication and Network Security
UNIVERSITY OF WOLLONGONG IN DUBAI
POORNIMA UNIVERSITY
Taylor & Francis
Routledge
Taylor & Francis Group
Springer
CERTIFICATE
OF PARTICIPATION
This certificate is proudly presented to
Pradeep Kumar K, Chethan K Murthy, Salma Itagi, Jeevaraj R, Mary Jasmine, Nethra H L, C Nandini, Manasa Sandeep,
In recognition of outstanding contribution as presenter of the oral presentation entitled
Comparative Analysis of Machine Learning Models For Lung Cancer Detection
at the First International Conference on Artificial Intelligence, Computation, Communication and Network Security (AICCoNS 2025) held inthe University of Wollongong in Dubai, 5-6 June 2025.
Professor Mai El Barachi
School of Computer Science
Dr. Manoj Kumar
Editorial Chair, AICCoNS 2025, UOWD, UAE

Dr. U. Pavan Kumar
Assistant Professor
Department of CSE(DS)

- Dr. U. Pavan Kumar has published a patent entitled “System and Method for Hybrid Wearable–Vision Monitoring of Alzheimer’s Patients with Adaptive Mode Switching and Secure Telehealth Alerts” Application No: 202541125359 on 09-01-2026.

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/12/2025

(21) Application No.202541125359 A
(43) Publication Date : 09/01/2026

(54) Title of the invention : System and Method for Hybrid Wearable–Vision Monitoring of Alzheimer's Patients with Adaptive Mode Switching and Secure Telehealth Alerts

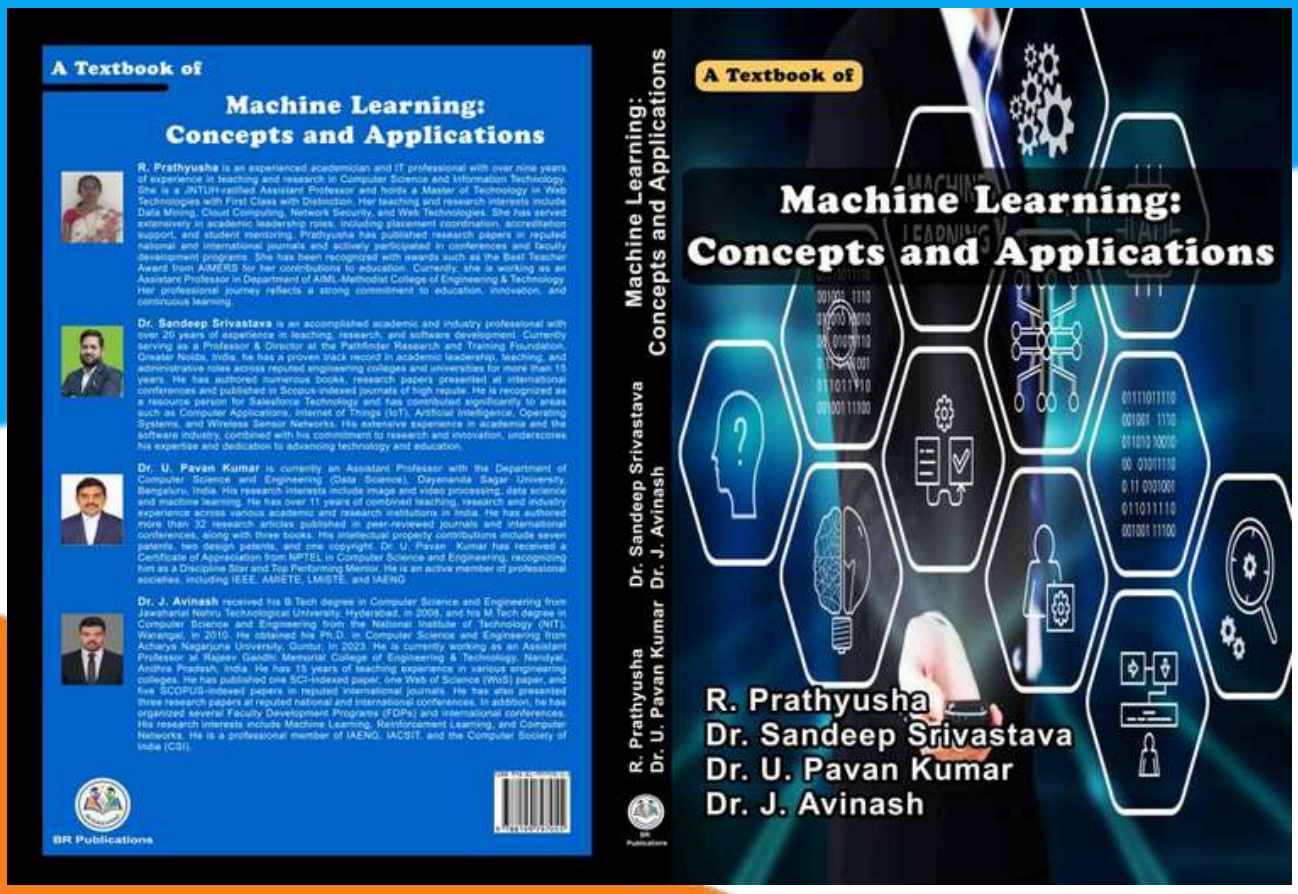
(51) International classification	:G06N 3/08, G06N 3/04, G06V 40/16, G16H 40/67, A61B 5/0205	(71)**Name of Applicant :** **1)Dayananda Sagar University** Address of Applicant :Dr. Bondu Venkateswarlu Professor Department of Computer Science and Engineering Dayananda Sagar University Email bonduvenkat-cse@dsu.edu.in 9848748895 Bengaluru South Karnataka India **2)Dr. Bondu Venkateswarlu** (72)**Name of Inventor :** **1)Dr. Bondu Venkateswarlu** **2)Dr. B V N Ramakumar** **3)U. Pavan Kumar** **4)Dr.T.Gayathri,**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No	:	
Filing Date	:01/01/1900	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
This invention outlines a unique, hybrid, intelligent, and privacy-preserving monitoring system for continuous, real-time supervision of Alzheimer patients. It fuses wearable vital-sign sensing, video-based analysis of socio-behavioural interactions, and context-aware decision logic into a single architecture that seamlessly transitions between wearable-only, video-only, and hybrid monitoring modes as needed. Deep-learning models, including LSTM–GAN behavioural modelling and CNN-based event detection, are integrated using low-latency edge processing and long-term cloud services for analytics, telehealth integration, and model updates. For regulatory-grade privacy protection, a dedicated anonymisation module removes facial identifiers before visual processing. Alerts, behaviour insights and status updates are delivered to authorised recipients via secure, encrypted communication channels. Use of the invention provides timely, actionable information to all stakeholders, including caregivers, clinicians and neurologists, assisted-living facilities, telehealth providers, emergency responders, and family, all of whom benefit from improved safety monitoring and clinical decision-making enabled by the present subject matter.

No. of Pages : 21 No. of Claims : 6

Dr. U. Pavan Kumar
Assistant Professor
Department of CSE(DS)

- Dr. U. Pavan Kumar has published a book entitled "Machine Learning: Concepts and Applications", with ISBN: 978-81-997970-5-5 on 19th January 2026.



Dr. U. Pavan Kumar
Assistant Professor
Department of CSE(DS)

- Dr. U. Pavan Kumar, has participated in a One Day Faculty Development Program titled “Cyber Security Essentials for the Digital Era,” organized by the Department of Computer Science and Engineering, Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya (SCSVMV), in association with Pencilbitz, on 22nd January 2026.

Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya (SCSVMV)

Deemed to be University | Accredited by NAAC with "A" Grade
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CERTIFICATE

Of PARTICIPATION

This Certificate is Presented to :

Dr. U. PAVAN KUMAR

CSE(DATA SCIENCE)

DAYANANDA SAGAR UNIVERSITY

has actively participated in the One Day Faculty Developement Program on **“Cyber Security Essentials for the Digital Era”** Organized by Department of Computer Science and Engineering in **Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya** in association with Pencilbitz. The programme was held on 22nd January 2026.

Dr. M. Senthil Kumar
HOD/CSE

Sangeetha Subramanian
Managing Director of Pencilbitz

Prof. Shivamma D
Assistant Professor
Department of CSE(DS)

Dr. Shaila S. G Professor and Chairperson
Department of CSE(DS)

- Prof. Shivamma D and Dr. Shaila S G has presented the paper titled “Vision Transformer Driven Sustainable Classification of Compound Facial Expressions Using Morphological Features” in the 5th International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES -2026) on 29th and 30th January 2026 organized by St. Joseph’s Institute of Technology, OMR, Chennai-119.

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OMR, CHENNAI - 119

5th International Conference on
Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES 2026)
29th - 30th January, 2026

CERTIFICATE

ICSES 376
Peer Reviewed

This certificate is presented to

Mrs. Shivamma D
Assistant Professor, Dept. of CSE (Data Science)
Dayananda Sagar University
Devarakaggalahalli, Harohalli, Kanakapura Road,
Bengaluru South District., Karnataka-562 112

for presenting the research paper entitled "**Vision Transformer Driven Sustainable Classification of Compound Facial Expressions Using Morphological Features**" at the IEEE Technical sponsored 2026 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES 2026) held at St. Joseph's Institute of Technology (Autonomous), Chennai, Tamil Nadu, India on 29th & 30th, January 2026.

Dr. K. Vijayakumar
Conference Chair

Dr. G. Sreekumar
Convener

Dr. S. Arivazhagan
General Chair

ICSES 2026

Technical Sponsor
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IEEE
Madras Section

Dr. Arun Balodi
Professors and Chairman
Department of ECE

- Dr. Arun Balodi, represented the IEEE Signal Processing Society (SPS), Bangalore Chapter as a Session Chair at the 4th IEEE International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE 2026) held on 22 January 2026 at BNM Institute of Technology, Bengaluru. The conference provided a strong platform for quality research presentations and technical discussions in computing, electrical, and electronics engineering. Dr. Balodi contributed to ensuring academic rigor and the smooth conduct of the sessions through active engagement with researchers.

B. N. M. Institute of Technology

An Autonomous Institution under VTU.

Technical Co-sponsorer

IEEE

IEEE BANGALORE SECTION

Certificate

DR. ARUN BALODI of DAYANANDA SAGAR UNIVERSITY BANGALORE has chaired a session in the 4th IEEE International Conference on "Intelligent and Innovative Technologies in Computing, Electrical and Electronics" organized by Department of Electronics and Communication Engineering and Department of Electrical and Electronics Engineering, BNMIT Bengaluru during 22nd & 23rd January 2026.

Dr. Yasha Jyothi M. Shirur, General Chair, IITCEE

Dr. Venkatesha K, General Chair, IITCEE

Dr. Krishnamurthy G. N., Deputy Director

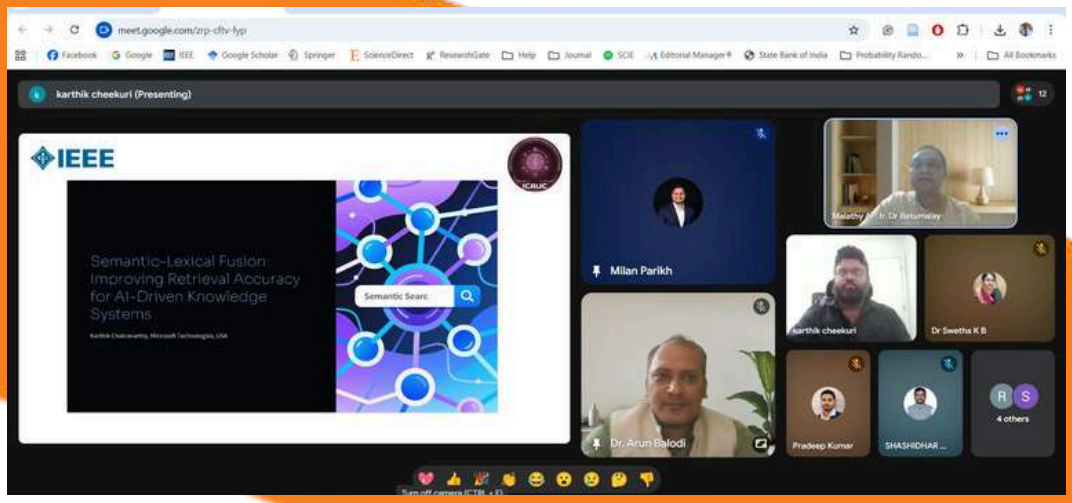
Dr. S. Y. Kulkarni, Additional Director & Principal

Prof. T. J. Ramamurthy, Director

NAAC NBA ARIIA INSTITUTION'S INNOVATION COUNCIL I-GAUGE DIAMOND

Dr. Arun Balodi
Professors and Chairman
Department of ECE

- Dr. Arun Balodi served as a Session Chair at IEEE ICAUC 2026, held on 21 January 2026 at Shinawatra University, Thailand, jointly organized with S.E.A. College of Engineering and Technology, Bengaluru. The sessions featured high-quality research presentations and engaging discussions in AI-driven smart systems and ubiquitous computing, reflecting the depth and rigor of the conference. The experience highlighted the value of academic collaboration and knowledge sharing within the IEEE research community.



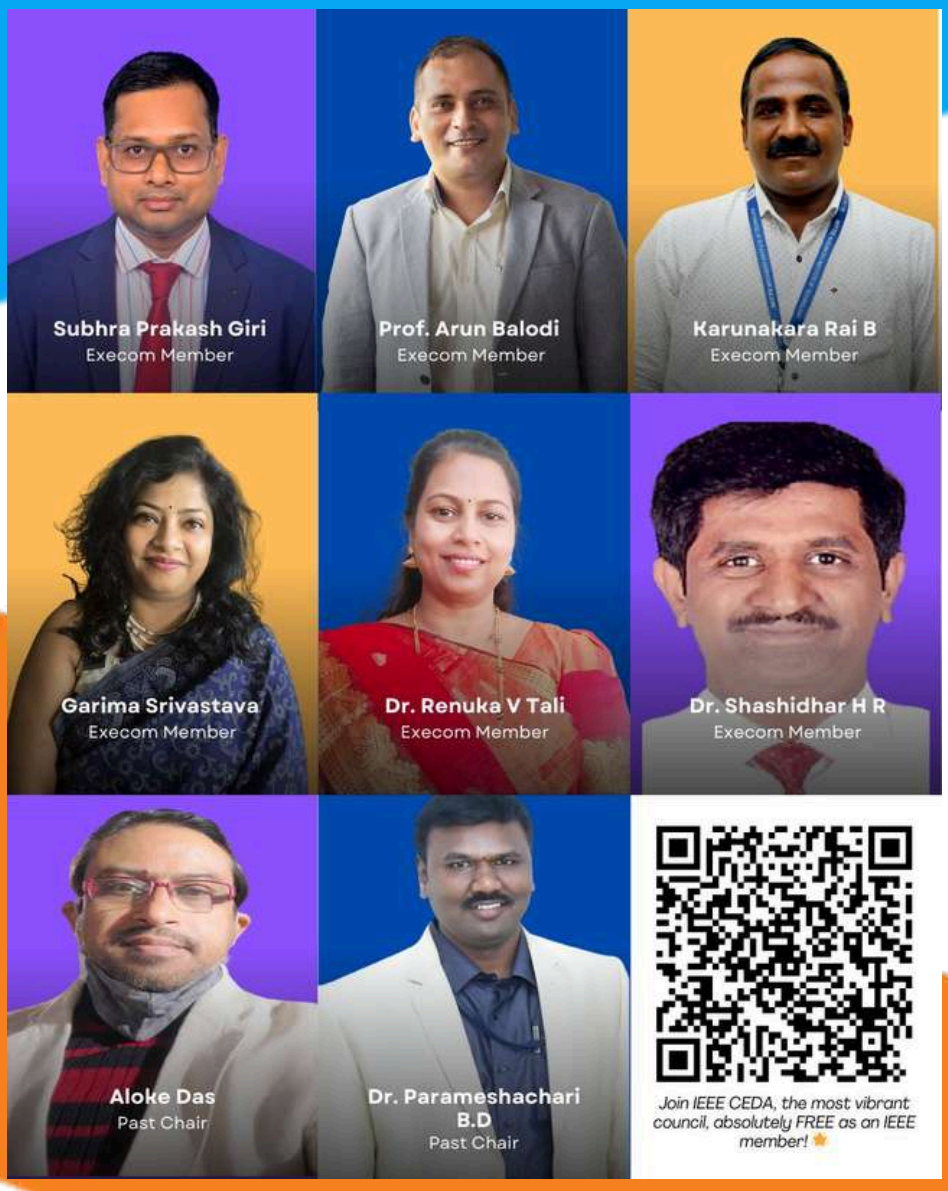
Dr. Arun Balodi
Professors and Chairman
Department of ECE

- Dr. Arun Balodi attended the IEEE Bangalore Section Annual General Meeting (AGM) 2026 on 18 January 2026 as an Executive Committee (ExeCom) Member. The AGM highlighted the Section's significant achievements in 2025, including becoming the largest IEEE Section worldwide with over 25,000 members, along with the successful delivery of strong technical, student, and industry-oriented programs. The meeting emphasized transparent governance, sound financial management, and a smooth leadership transition for 2026. Special recognition was accorded to award-winning chapters, including IEEE SPS Bangalore and IEEE VTS Bangalore, for their global achievements.


50 YEARS
#1
ANNUAL GENERAL MEETING

Dr. Arun Balodi
Professors and Chairman
Department of ECE

- Dr. Arun Balodi has been inducted as an Executive Committee (ExeCom) Member of the IEEE CEDA Bangalore Chapter for 2026. He looks forward to contributing to the chapter's technical initiatives, workshops, and professional engagement activities, fostering a vibrant community for Electronic Design Automation (EDA) professionals and researchers.



Dr. Arun Balodi
Professors and Chairman
Department of ECE

- Dr. Arun Balodi received a Certificate of Appreciation for his role as an IEEE Day 2025 Ambassador. As part of the global celebration themed “Leveraging Technology for a Better Tomorrow,” he contributed to promoting technical excellence and community engagement across IEEE Region 10 and the IEEE Bangalore Section. The recognition reflects his active involvement and commitment to IEEE’s mission and volunteer leadership.

Dr. Arun Balodi
Professors and Chairman
Department of ECE

- Dr. Arun Balodi received a Certificate of Appreciation for his contribution as a Session Chair at the 2026 International Conference on Electric Power and Renewable Energy (EPREC-2026), organized by the Department of Electrical Engineering, Indian Institute of Technology Bhilai, and held from 2–4 January 2026. The conference provided a strong platform for discussions on electric power systems and renewable energy technologies, and his role contributed to maintaining the technical quality and smooth conduct of the sessions.

IITBH/EED/EPREC/2026/SCH/6D/45

EPREC IIT BHILAI

IEEE MADHYA PRADESH SECTION

IEEE

IEEE IAS INDUSTRY APPLICATIONS SOCIETY

2026 International Conference on Electric Power and Renewable Energy (EPREC-2026)

Certificate of Appreciation

This Certificate is presented to **Prof. Arun Balodi** from **Dayananda Sagar University, Bangalore** in recognition of his/her valuable contribution as **Session Chair** at the **2026 International Conference on Electric Power and Renewable Energy (EPREC-2026)** organized by the Department of Electrical Engineering, Indian Institute of Technology Bhilai, and held from 2nd - 4th January 2026.

Dr. Avishek Adhikary
General Co-Chair
EPREC 2026

Shailendra Kumar

Dr. Shailendra Kumar
Organizing Chair
EPREC 2026

Dr. Krishna Murari
Organizing Chair
EPREC 2026

Prof. Abhinav Karan
Assistant Professor
Department of ECE

- Prof. Abhinav Karan participated in the “TechPulse – Early Engagement Program” FDP 2026, organized by Tata Technologies, Bengaluru, from 19 to 23 January 2026. The program focused on industry-oriented learning and early engagement initiatives, strengthening academia–industry collaboration and enhancing professional competencies aligned with current technological practices.

Dr. Shirshendu Roy
Assistant Professor
Department of ECE

- Dr. Shirshendu Roy participated in the “TechPulse – Early Engagement Program” FDP 2026, organized by Tata Technologies, Bengaluru, from 19 to 23 January 2026. The program focused on industry-oriented learning and early engagement initiatives, strengthening academia–industry collaboration and enhancing professional competencies aligned with current technological practices.

Dr. Pushpa Mala S
Associate Professor
Department of ECE

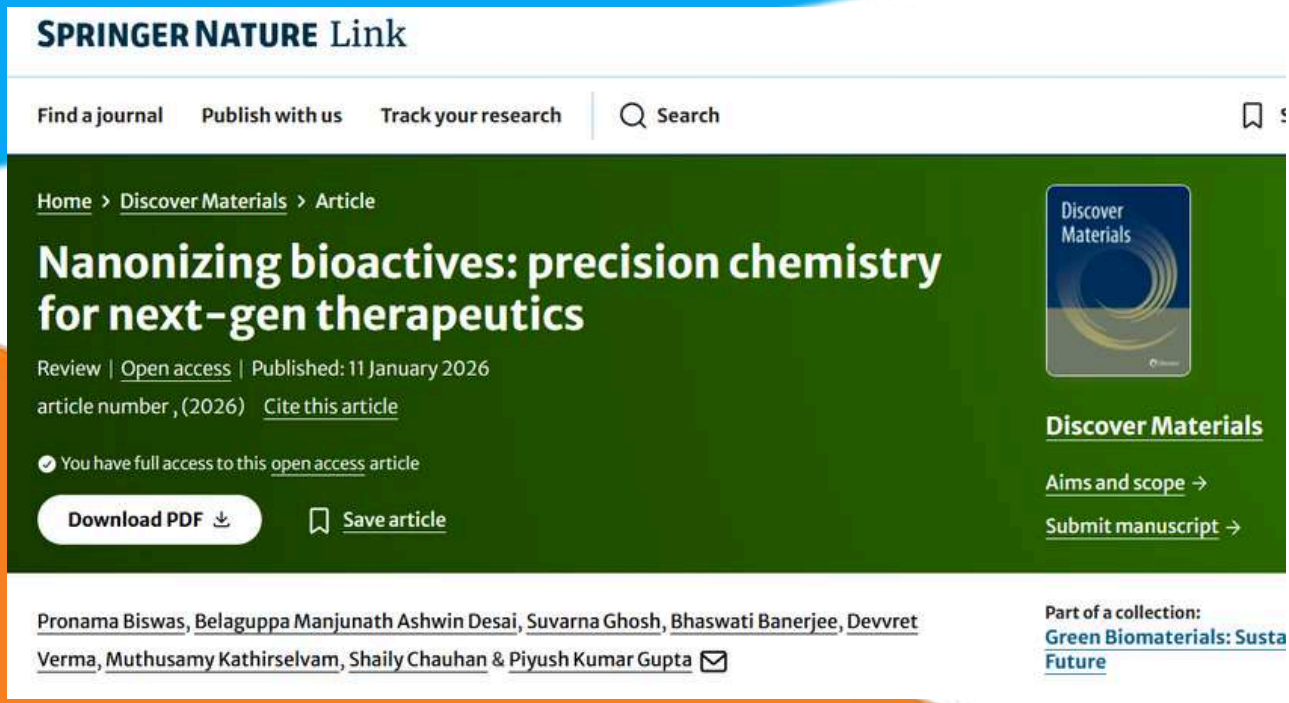
- Dr. Pushpa Mala S was honored with the IEEE WIE Bangalore Section Outstanding WIE Professional (Academia) Award – 2025 in recognition of her outstanding contributions to the Women in Engineering (WIE) Affinity Group, IEEE Bangalore Section. The award acknowledges her dedicated service, leadership, and sustained efforts in promoting WIE activities and empowering women in engineering during the year 2025.

Dr. Pushpa Mala S
Associate Professor
Department of ECE

- Dr Pushpa Mala S, Dept. of Electronics and Communication Engineering served as the resource person for a focused Faculty Development Program (FDP) on NBA Awareness on January 29, 2026. It was an incredible experience engaging with a dedicated group of educators who are passionate about elevating the standards of technical education. The session was focusses on CO-PO Mapping.

Dr BM Ashwin Desai
Assistant Professor
Department of ECE

- Dr BM Ashwin Desai has published a comprehensive open-access review article titled “Nanonizing Bioactives: Precision Chemistry for Next-Gen Therapeutics” in Discover Materials (Springer Nature) in January 2026. This Q1 journal (Impact Factor: 5.1) publication is the outcome of nearly three years of sustained collaborative research and was published without Article Processing Charges (APC). The work provides an in-depth perspective on nanonization strategies for next-generation therapeutic applications.



Prof. Nadavadi Harshith Gowd
Assistant Professor
Department of CSE (AI & DS)

- Prof. Nadavadi Harshith Gowd has successfully participated and completed the One Week Faculty Development Programme on “Generative AI With LLMs: Prompt Engineering, Automation & Intelligent Systems” organized by the Department of Information Technology, Vardhaman College of Engineering, Hyderabad, in association with Pantech Solutions Pvt. Ltd. from 05th to 09th January 2026.

VCE VARDHAMAN COLLEGE OF ENGINEERING

IEEE Computational Intelligence Society

PANTECH SOLUTIONS Technology Beyond The Dreams

CERT NO PS-FDP-114

CERTIFICATE OF COMPLETION

THIS IS TO CERTIFY THAT

Mr. NADAVADI HARSHITH GOWD

Dayananda Sagar university

has successfully participated and completed the
One Week Faculty Development Programme on
“Generative AI With LLMs: Prompt Engineering, Automation & Intelligent Systems”
organized by the Department of Information Technology,
Vardhaman College of Engineering, Hyderabad,
in association with **Pantech Solutions Pvt. Ltd.** from **05th** to **09th January 2026.**

DR. G SREENIVASULU
HOD-IT , VCE

Ravindra
PROF. J V R RAVINDRA
PRINCIPAL, VCE

SENTHIL KUMAR M R
DIRECTOR, PANTECH

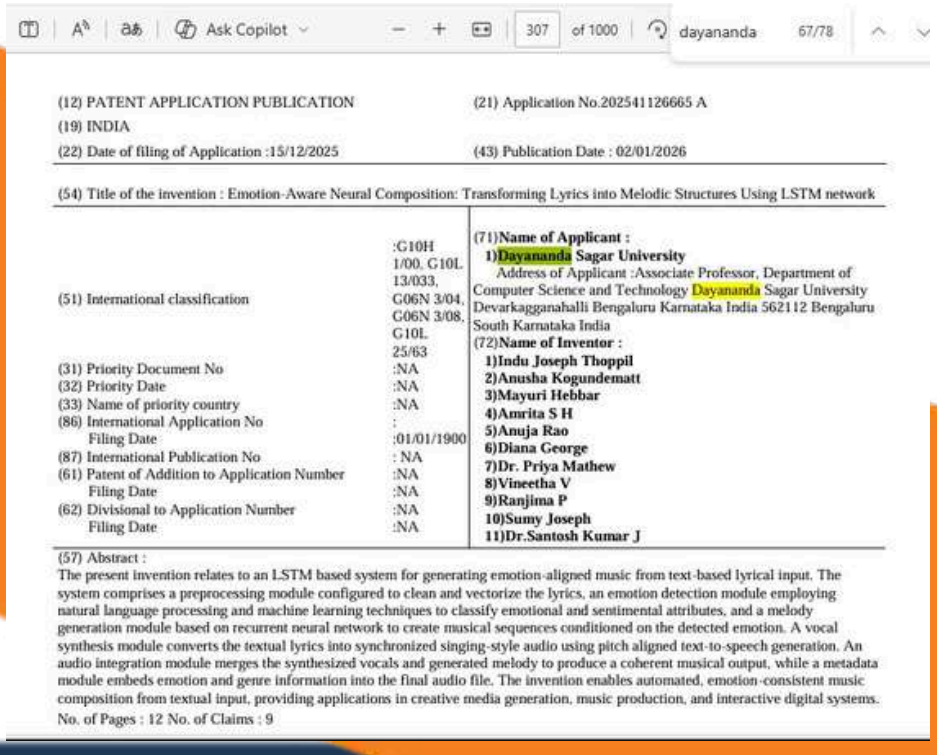
Dr. Santhosh Kumar J
Associate Professor
Department of CST

- Dr. Santosh Kumar Janakatti has been recognised as screening evaluator for Smart India Hackathon 2025

Dr. Santhosh Kumar J
Associate Professor
Department of CST

Dr. Santosh Kumar Janakatti has Published following 5 Patents:

- AI-Driven System for Mapping Cardiovascular Biomarkers to Emotional and Cognitive Health State Patent no: 202541123300.
- Emotion-Aware Neural Composition: Transforming Lyrics into Melodic Structures Using LSTM network Patent no: 202541126665.
- A Method and System for Blur-Aware Enhancement, Classification, and Adaptive Restoration of Aerial Images Patent no: 202641000801.
- Noise-Resilient Handwritten Language Recognition Method Integrating Handcrafted and Deep Spatial-Temporal Features Patent no: 202541123092.
- Advanced Autonomous Vehicle System Using Behaviour Cloning For Path Optimisation Patent No: 202641001597.
- A UNIVERSAL AUTOMATIC CAR COVER SYSTEM ACTIVATED BY A SWITCH FOR PARKED VEHICLES, Application No. 202641005037 ORDINARY APPLICATION



Ask Copilot 307 of 1000 dayananda 67/78

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/12/2025

(21) Application No.202541126665 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Emotion-Aware Neural Composition: Transforming Lyrics into Melodic Structures Using LSTM network

(51) International classification	:G10H 1/00, G10L 13/033, G06N 3/04, G06N 3/08, G10L 25/63
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)Dayananda Sagar University
Address of Applicant :Associate Professor, Department of Computer Science and Technology Dayananda Sagar University Devarkagganahalli Bengaluru Karnataka India 562112 Bengaluru South Karnataka India
(72)**Name of Inventor :**
1)Indu Joseph Thoppil
2)Anusha Kogundematt
3)Mayuri Hebbar
4)Amrita S H
5)Anuja Rao
6)Diana George
7)Dr. Priya Mathew
8)Vineetha V
9)Ranjima P
10)Sumy Joseph
11)Dr.Santosh Kumar J

(57) Abstract :
The present invention relates to an LSTM based system for generating emotion-aligned music from text-based lyrical input. The system comprises a preprocessing module configured to clean and vectorize the lyrics, an emotion detection module employing natural language processing and machine learning techniques to classify emotional and sentimental attributes, and a melody generation module based on recurrent neural network to create musical sequences conditioned on the detected emotion. A vocal synthesis module converts the textual lyrics into synchronized singing-style audio using pitch aligned text-to-speech generation. An audio integration module merges the synthesized vocals and generated melody to produce a coherent musical output, while a metadata module embeds emotion and genre information into the final audio file. The invention enables automated, emotion-consistent music composition from textual input, providing applications in creative media generation, music production, and interactive digital systems.
No. of Pages : 12 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/12/2025
(21) Application No.202541123300 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : AI-Driven System for Mapping Cardiovascular Biomarkers to Emotional and Cognitive Health State

(51) International classification	:A61B 5/00, A61B 5/024, A61B 5/16, G16H 50/30, A61B 5/0205
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)Dayananda Sagar University
Address of Applicant :Associate Professor, CST Department, Dayananda Sagar University, Devarakaggalahalli, Harohalli,Kanakapura Road, Bengaluru South, Karnataka 562112 Bengaluru South Karnataka India
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2)Prof. Soumadip Mondal
3)Prof. Suhita Biswas
4)Prof. Sonali Bairagi
5)Prof. Sweta Chopdar
6)Dr. Santosh Kumar J

(57) Abstract :
The CardioIntelliBrain Mapping Model (CIBM) is an AI-powered framework designed to assess emotional, cognitive, and psychological well-being using heart rate variability (HRV) and cardiovascular signals. By integrating wearable sensing technologies, advanced signal processing, and a hybrid deep learning architecture, the system extracts meaningful physiological biomarkers linked to autonomic nervous system activity. These biomarkers enable real-time estimation of mental health indicators such as stress levels, emotional stability, cognitive workload, and fatigue. Through continuous, non-invasive monitoring, CIBM supports personalized baseline generation, long-term trend analysis, and adaptive wellness recommendations. Its scalable design enables deployment across telemedicine, workplace wellness, education, sports performance, and general mental health management. By grounding mental health evaluation in objective physiological data, CIBM provides a more accurate, accessible, and proactive alternative to conventional self-reported assessments.
No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/12/2025
(21) Application No.202541123092 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Noise-Resilient Handwritten Language Recognition Method Integrating Handcrafted and Deep Spatial-Temporal Features

(51) International classification	:G06V 30/10, G06N 3/04, G06K 9/62, G06K 9/00, G06N 3/08
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)Dayananda Sagar university
Address of Applicant :Faculty of Department of Computer Science and Engineering Dayananda Sagar University Devarkagganahalli Bengaluru Karnataka India 562112 Bengaluru South Karnataka India
(72)**Name of Inventor :**
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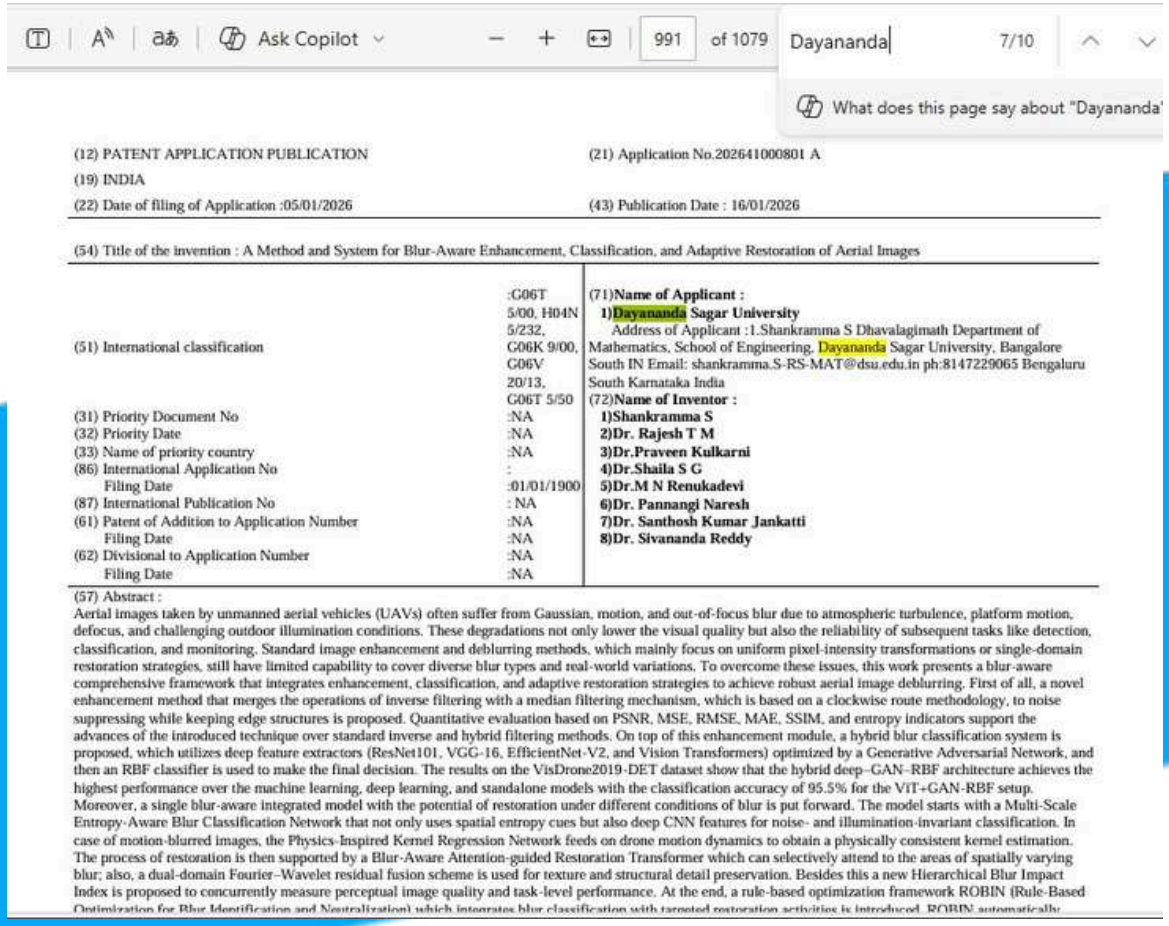
2)Ranjima P
3)Vinitha.V
4)Dr. Navya .R
5)Santhosh kumar R
6)K.Sudha deepthi
7)Shivamma D
8)Kavyashree I pattan
9)Dharmendra D P
10)Dr. Santosh Kumar J

(57) Abstract :
The invention relates to a noise-resilient method for handwritten language recognition using a hybrid feature-extraction framework that combines handcrafted descriptors with deep spatial-temporal learning. The method includes pre-processing handwritten input images through noise filtering, binarization, skew correction, and normalization. Handcrafted features comprising Histogram of Oriented Gradients (HOG), Scale-Invariant Feature Transform (SIFT), and Zernike Moments are extracted to capture structural and shape-based properties. In parallel, spatial and temporal features are learned using a Convolutional Neural Network (CNN) and Long Short-Term Memory (LSTM) architecture. The outputs from the handcrafted and deep-learning pathways are fused to generate a composite feature vector, which is subsequently classified to identify the script or language of the handwritten data. The method provides improved recognition accuracy in the presence of noise, distortions, illumination variations, and inconsistent handwriting styles. The invention is applicable to multilingual handwritten document processing, digitization, and integration with OCR systems.
No. of Pages : 13 No. of Claims : 9



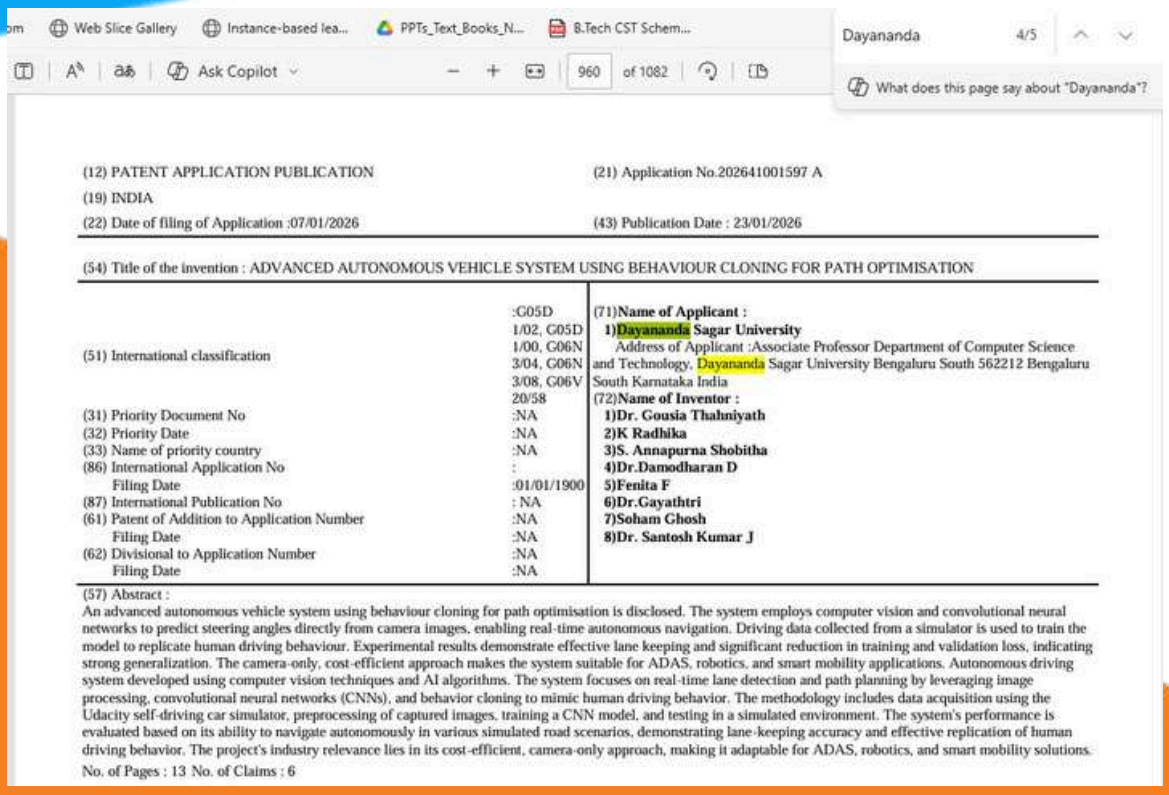
(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/01/2026

(21) Application No.202641000801 A
(43) Publication Date : 16/01/2026

(54) Title of the invention : A Method and System for Blur-Aware Enhancement, Classification, and Adaptive Restoration of Aerial Images

(51) International classification	:G06T 5/00, H04N 5/232, G06K 9/00, G06V 20/13, G06T 5/50	(71)**Name of Applicant :** **1)Dayananda Sagar University** Address of Applicant :1.Shankramma S Dhavalagimath Department of Mathematics, School of Engineering, Dayananda Sagar University, Bangalore South IN Email: shankramma.S-RS-MAT@dsu.edu.in ph:8147229065 Bengaluru South Karnataka India
(31) Priority Document No	:NA	(72)**Name of Inventor :** **1)Shankramma S**
(32) Priority Date	:NA	**2)Dr. Rajesh T M**
(33) Name of priority country	:NA	**3)Dr.Praveen Kulkarni**
(86) International Application No Filing Date	:01/01/1900	**4)Dr.Shaila S G** **5)Dr.M N Renukadevi**
(87) International Publication No	: NA	**6)Dr. Pannangi Naresh**
(61) Patent of Addition to Application Number Filing Date	:NA :NA	**7)Dr. Santhosh Kumar Jankatti** **8)Dr. Sivananda Reddy**
(62) Divisional to Application Number Filing Date	:NA :NA	

(57) Abstract :
Aerial images taken by unmanned aerial vehicles (UAVs) often suffer from Gaussian, motion, and out-of-focus blur due to atmospheric turbulence, platform motion, defocus, and challenging outdoor illumination conditions. These degradations not only lower the visual quality but also the reliability of subsequent tasks like detection, classification, and monitoring. Standard image enhancement and deblurring methods, which mainly focus on uniform pixel-intensity transformations or single-domain restoration strategies, still have limited capability to cover diverse blur types and real-world variations. To overcome these issues, this work presents a blur-aware comprehensive framework that integrates enhancement, classification, and adaptive restoration strategies to achieve robust aerial image deblurring. First of all, a novel enhancement method that merges the operations of inverse filtering with a median filtering mechanism, which is based on a clockwise route methodology, to noise suppressing while keeping edge structures is proposed. Quantitative evaluation based on PSNR, MSE, RMSE, MAE, SSIM, and entropy indicators support the advances of the introduced technique over standard inverse and hybrid filtering methods. On top of this enhancement module, a hybrid blur classification system is proposed, which utilizes deep feature extractors (ResNet101, VGG-16, EfficientNet-V2, and Vision Transformers) optimized by a Generative Adversarial Network, and then an RBF classifier is used to make the final decision. The results on the VisDrone2019-DET dataset show that the hybrid deep–GAN–RBF architecture achieves the highest performance over the machine learning, deep learning, and standalone models with the classification accuracy of 95.5% for the ViT+GAN-RBF setup. Moreover, a single blur-aware integrated model with the potential of restoration under different conditions of blur is put forward. The model starts with a Multi-Scale Entropy-Aware Blur Classification Network that not only uses spatial entropy cues but also deep CNN features for noise- and illumination-invariant classification. In case of motion-blurred images, the Physics-Inspired Kernel Regression Network feeds on drone motion dynamics to obtain a physically consistent kernel estimation. The process of restoration is then supported by a Blur-Aware Attention-guided Restoration Transformer which can selectively attend to the areas of spatially varying blur; also, a dual-domain Fourier–Wavelet residual fusion scheme is used for texture and structural detail preservation. Besides this a new Hierarchical Blur Impact Index is proposed to concurrently measure perceptual image quality and task-level performance. At the end, a rule-based optimization framework ROBIN (Rule-Based Optimization for Blur Identification and Neutralization) which integrates blur classification with targeted restoration activities is introduced. ROBIN automatically



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/01/2026

(21) Application No.202641001597 A
(43) Publication Date : 23/01/2026

(54) Title of the invention : ADVANCED AUTONOMOUS VEHICLE SYSTEM USING BEHAVIOUR CLONING FOR PATH OPTIMISATION

(51) International classification	:G05D 1/02, G05D 1/00, G06N 3/04, G06N 3/08, G06V 20/58	(71)**Name of Applicant :** **1)Dayananda Sagar University** Address of Applicant :Associate Professor Department of Computer Science and Technology, Dayananda Sagar University Bengaluru South 562212 Bengaluru South Karnataka India
(31) Priority Document No	:NA	(72)**Name of Inventor :** **1)Dr. Gousia Thahniyath**
(32) Priority Date	:NA	**2)K Radhika**
(33) Name of priority country	:NA	**3)S. Annapurna Shobitha**
(86) International Application No Filing Date	:01/01/1900	**4)Dr.Damodharan D** **5)Fenita F**
(87) International Publication No	: NA	**6)Dr.Gayathtri**
(61) Patent of Addition to Application Number Filing Date	:NA :NA	**7)Soham Ghosh** **8)Dr. Santosh Kumar J**
(62) Divisional to Application Number Filing Date	:NA :NA	

(57) Abstract :
An advanced autonomous vehicle system using behaviour cloning for path optimisation is disclosed. The system employs computer vision and convolutional neural networks to predict steering angles directly from camera images, enabling real-time autonomous navigation. Driving data collected from a simulator is used to train the model to replicate human driving behaviour. Experimental results demonstrate effective lane keeping and significant reduction in training and validation loss, indicating strong generalization. The camera-only, cost-efficient approach makes the system suitable for ADAS, robotics, and smart mobility applications. Autonomous driving system developed using computer vision techniques and AI algorithms. The system focuses on real-time lane detection and path planning by leveraging image processing, convolutional neural networks (CNNs), and behavior cloning to mimic human driving behavior. The methodology includes data acquisition using the Udacity self-driving car simulator, preprocessing of captured images, training a CNN model, and testing in a simulated environment. The system's performance is evaluated based on its ability to navigate autonomously in various simulated road scenarios, demonstrating lane-keeping accuracy and effective replication of human driving behavior. The project's industry relevance lies in its cost-efficient, camera-only approach, making it adaptable for ADAS, robotics, and smart mobility solutions.
No. of Pages : 13 No. of Claims : 6

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Government of India

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS | GEOGRAPHICAL INDICATIONS

Application Details	
APPLICATION NUMBER	202641005037
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	19/01/2026
APPLICANT NAME	**Dayananda Sagar University**
TITLE OF INVENTION	A UNIVERSAL AUTOMATIC CAR COVER SYSTEM ACTIVATED BY A SWITCH FOR PARKED VEHICLES
FIELD OF INVENTION	MECHANICAL ENGINEERING
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ADDITIONAL-EMAIL (As Per Record)	sjankatti@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	30/01/2026

Application Status	
APPLICATION STATUS	**Awaiting Request for Examination**

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Filed → Published → RQ Filed → Under Examination → Disposed

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Dr. Santhosh Kumar J
Associate Professor
Department of CST

- Dr. Santosh Kumar Janakatti has Published a Conference Paper with Students: Worldcoin Market Analysis using ETL Pipeline and Time-Series Data, 2025 International Conference on Communication, Computer, and Information Technology (IC3IT). DOI: 10.1109/IC3IT66137.2025.11341141

2025 International Conference on Communication, Computer, and Information Technology (IC3IT)

Worldcoin Market Analysis using ETL Pipeline and Time-Series Data

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Information Technology (IC3IT) | 979-8-3315-2483-8/25/$31.00 ©2025 IEEE | DOI: 10.1109/IC3IT66137.2025.11341141

***Abstract*—This paper presents an ETL framework tailored for high-frequency Worldcoin (WLD) market data, addressing limitations of existing pipelines that rely on static datasets and lack integration of technical indicators. The system, implemented in Python with a MySQL backend, automates ingestion, preprocessing, feature engineering, and storage of over 193,000 records collected at 5-minute intervals between July 2023 and May 2025. Data quality enhancements include treatment of missing values and noise reduction, while visualization modules support detailed monitoring of volatility, trading patterns, and liquidity shocks. Experimental results highlight strong correlations between price features, event-driven opening gaps, and discrepancies between actual and quote volumes. The pipeline is modular, scalable, and designed for seamless integration with predictive models such as LSTM, ARIMA, and Transformers. This work contributes the first ETL architecture optimized for high-frequency Worldcoin analytics, providing a reproducible and extensible foundation for cryptocurrency research and decentralized financial applications.**

***Keywords*—Worldcoin (WLD), Cryptocurrency Analysis, ETL Pipeline, Time-Series Data, SMA, EMA, TMA, High-**

handling millions of records per day . Furthermore, most studies focus on Bitcoin or Ethereum while largely neglecting emerging tokens such as Worldcoin, despite their increasing importance in decentralized finance. These challenges motivate the de- velopment of a dedicated high-frequency Extract, Transform, Load (ETL) pipeline optimized for cryptocurrency analytics.

To address these limitations, this paper introduces a scalable and modular ETL framework that automates the ingestion, pre- processing, and storage of Worldcoin market data directly from the Binance API. Unlike conventional file-based workflows, the proposed system eliminates intermediate dependencies, ensures relational storage, and supports query-driven analytics. The dataset spans from July 2023 to May 2025, comprising more than 193,000 records aggregated at 5-minute intervals, with an average ingestion latency of 15 seconds. This enables detailed exploration of price volatility, liquidity dynamics, and temporal trading behaviors.The framework is not limited to descriptive statistics but also prepares data for predictive modeling. By integrating technical indicators such as the Simple Moving Average (SMA),

Dr. Santhosh Kumar J
Associate Professor
Department of CST

- Dr. Santosh Kumar Jankatti of Computer Science and Technology Department has reviewed papers in the 4th IEEE International Conference on " Intelligent and Innovative Technologies in Computing, Electrical and Electronics" organized by Department of Electronics and Communication Engineering and Department of Electrical and Electronics Engineering, BNMIT Bengaluru during 22 & 23 January 2026.

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Dr. Santosh Kumar Jankatti of

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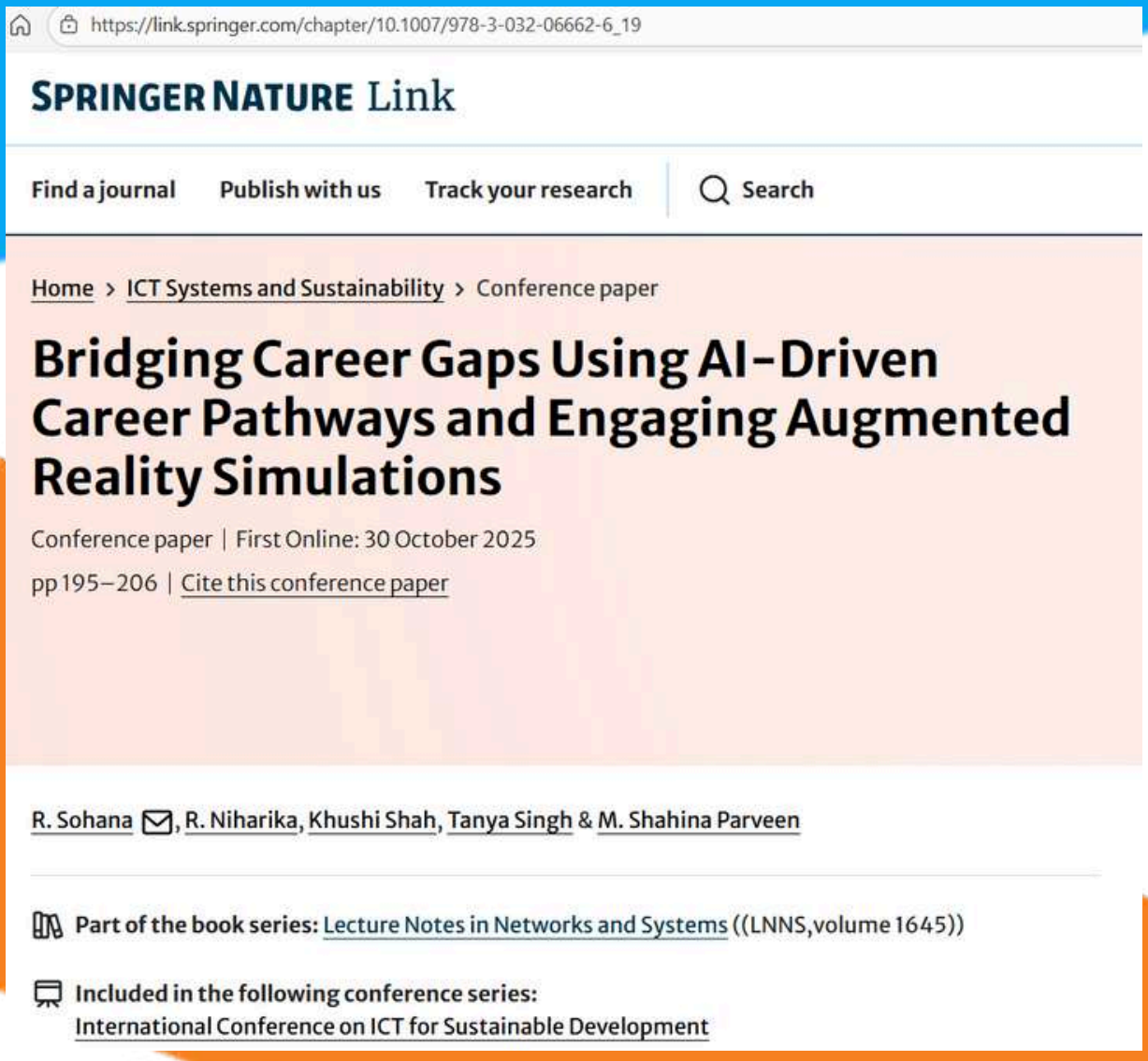
Dr. Krishnamurthy G. N. — Deputy Director

Dr. S. Y. Kulkarni — Additional Director & Principal

Prof. T. J. Ramamurthy — Director

Dr. M Shahina Parveen
Professor and Chairperson
Department of CST

- Dr. M Shahina Parveen has published a Conference Paper with Students:Bridging career gaps using AI- driven career pathways and engaging Augmented Reality Simulations, 2025 10th International Conference on ICT for Sustainable Development. DOI: 10.1007/978-3-032-06662-6_19



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Conference paper | First Online: 30 October 2025

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R. Sohana, R. Niharika, Khushi Shah, Tanya Singh & M. Shahina Parveen

Part of the book series: Lecture Notes in Networks and Systems ((LNNS,volume 1645))

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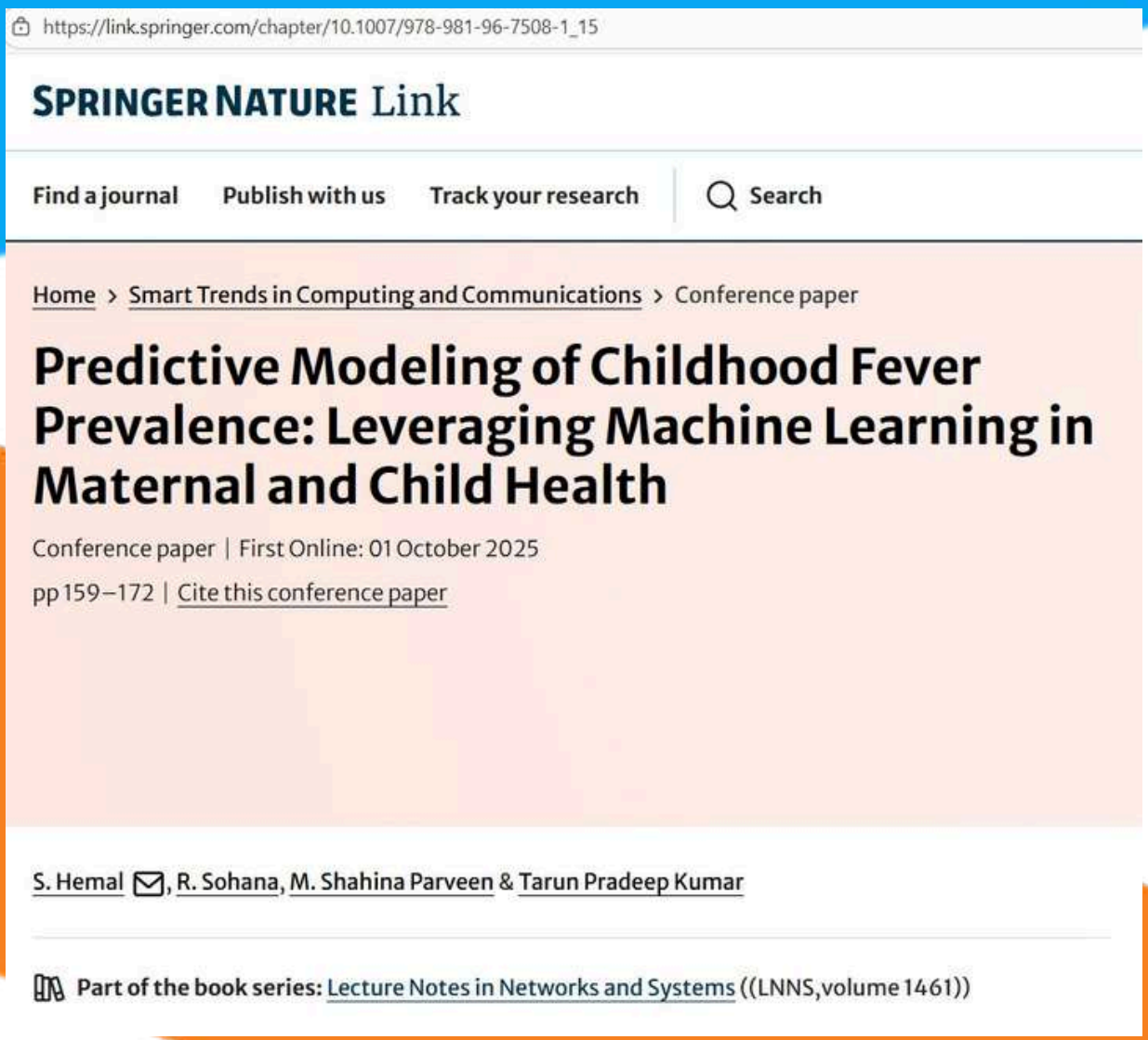
Dr. M Shahina Parveen
Professor and Chairperson
Department of CST

- Dr. M Shahina Parveen has published a Conference Paper with Students:Predictive Modelling of Childhood Fever Prevalence: Leveraging Machine Learning in Maternal and Child Health, 2025 9th International Conference on Smart Trends in Computing and Communications. https://doi.org/10.1007/978-981-96-7508-1_15



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Predictive Modeling of Childhood Fever Prevalence: Leveraging Machine Learning in Maternal and Child Health

Conference paper | First Online: 01 October 2025

pp 159–172 | Cite this conference paper

S. Hemal, R. Sohana, M. Shahina Parveen & Tarun Pradeep Kumar

Part of the book series: Lecture Notes in Networks and Systems ((LNNS,volume 1461))

Dr. M Shahina Parveen
Professor and Chairperson
Department of CST

- Dr. M Shahina Parveen of Computer Science and Technology Department has reviewed papers in the 4th IEEE International Conference on " Intelligent and Innovative Technologies in Computing, Electrical and Electronics" organized by Department of Electronics and Communication Engineering and Department of Electrical and Electronics Engineering, BNMIT Bengaluru during 22 & 23 January 2026.

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Dayananda Sagar University has reviewed papers in the

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General Chair, IITCEE	General Chair, IITCEE	Deputy Director	Additional Director & Principal	Director

Prof. Vinayaka V M
Assistant Professor
Department of CST

- Prof. Vinayaka V M has completed Swayam Course on “Android Mobile Application Development” with a consolidated score of 78% marks in the proctored examination held on 13/12/2025 offered by Dr. Himanshu N. Patel of Dr. Babasaheb Ambedkar Open University, Ahmedabad.

SWAYAM ONLINE COURSE CERTIFICATION

This Certificate is awarded to

V M VINAYAKA

for successfully completing the 4 credit course

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Dr. Babasaheb Ambedkar Open University, Ahmedabad

Roll No:KK20010507

Marks in Online Assignments		Marks in Proctored Exam		Total Score	
Total	Obtained	Total	Obtained	Total	Obtained
30	23	**70**	55	**100**	78

Prof. Uma Kanjilal
National Coordinator
Indira Gandhi National Open University, New Delhi

Issued On: 20/01/2026

Prof. Ami U. Upadhyay
Vice-Chancellor
Dr. Babasaheb Ambedkar Open University, Ahmedabad

Dr. Sudha D
Associate Professor
Department of CST

- Dr. Danthuluri Sudha of Computer Science and Technology Department has reviewed papers in the 4th IEEE International Conference on " Intelligent and Innovative Technologies in Computing, Electrical and Electronics" organized by Department of Electronics and Communication Engineering and Department of Electrical and Electronics Engineering, BNMIT Bengaluru during 22 & 23 January 2026.

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Dr. Yasha Jyothi M. Shirur, General Chair, IITCEE
Dr. Venkatesha K, General Chair, IITCEE
Dr. Krishnamurthy G. N., Deputy Director
Dr. S. Y. Kulkarni, Additional Director & Principal
Prof. T. J. Ramamurthy, Director

Prof. Sripad Kulkarni
Assistant Professor
Department of Aerospace Engineering

Dr. B V N Ramakumar
Professor
Department of Aerospace Engineering

- The paper titled *“Experimental and machine learning-based analysis of wear behaviour in CNT and titanium reinforced copper matrix composites”* was published in the Canadian Journal of Metallurgy and Materials Science (Taylor & Francis Online). The authors are Prof Sripad Kulkarni S and Dr. B. V. N. Ramakumar from the Department of Aerospace Engineering, DSU, along with Dr. Y. P. Raviteja from the Department of Mechanical Engineering, DSU. It presents an experimental and machine-learning investigation of the wear behaviour of copper matrix composites reinforced with carbon nanotubes (CNT) and titanium, focusing on enhancing material performance for aerospace and mechanical applications.


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Research Article

Experimental and machine learning-based analysis of wear behaviour in CNT and titanium reinforced copper matrix composites

Y. P. Ravitej, Sripad Kulkarni, N. Subramani, B. V. N. Ramakumar, H. L. Vinayaka, Prabhakar Kuppahalli, ...show all

Received 22 Oct 2025, Accepted 14 Jan 2026, Published online: 27 Jan 2026

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Dr. Dilip Kumar Jang Bahadur Saini
Associate Professor & Chairperson
Department of CSE (Cyber Security)

Dr. Dilip K. Jang Bahadur Saini has served as a Session Chair at the 17th IEEE International Conference on Computational Intelligence and Communication Networks (CICN-2025), held at NIT Goa, India, during 20–21 December 2025.

17th IEEE INTERNATIONAL CONFERENCE
ON
COMPUTATIONAL INTELLIGENCE AND COMMUNICATION NETWORKS
(CICN-2025)
December 20-21, 2025

Certificate of Appreciation

This is to certify that Prof./Dr./Ms./Mr. Dr. Dilip K. Jang Bahadur Saini from Dayananda Sagar University, Bengaluru has Contributed as Session Chair in 17th IEEE International Conference on Computational Intelligence and Communication Networks (CICN-2025) held at NIT Goa, India, during December 20-21, 2025. We appreciate your contribution to the Conference.

Prof. Manish Dixit
IEEE MP Section

Dr. Lalat Indu Giri
NIT Goa

Dr. Indushree M
Assistant Professor
Department of CSE (Cyber Security)

Dr. Indushree M, has successfully completed the AICTE Training and Learning (ATAL) Academy Faculty Development Program on “Quantum Communication: Recent Progress and Future Research Direction.”
The FDP was conducted at the National Institute of Technology (NIT), Tiruchirappalli, from 19th January to 24th January 2026 under the aegis of the All India Council for Technical Education (AICTE).

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AICTE Training and Learning (ATAL) Academy

Certificate

It is certified that ***Dr. Indushree M, Assistant Professor*** *of* ***Dayananda Sagar University*** *has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on* ***Quantum Communication: Recent Progress and Future Research Direction*** *at* ***National Institute of Technology, Tiruchirappalli*** *from* ***19/01/2026*** *to* ***24/01/2026.***

[redacted]

Sudharsan Parthasarathy
Assistant Professor Level (AICTE Institute), Coordinator
National Institute of Technology, Tiruchirappalli

Dr. Sunil Luthra
Director & Bureau Head
Training and Learning Bureau, AICTE

Dr. Mubeen Ahmed Khan
Assistant Professor
Department of CSE (Cyber Security)

Dr. Mubeen Ahmed Khan served as a Reviewer for the 7th International Conference on Machine Learning, Image Processing, Network Security and Data Science (MIND-2025), held from 12th–14th December 2025 at Malaviya National Institute of Technology (MNIT), Jaipur, India.

Certificate No.: MIND-2025/RC/36

7th International conference on Machine Learning, Image Processing, Network security and Data Science (MIND-2025)

mind 2025 | CCIS | Springer | IEEE Computational Intelligence Society

Certificate of Appreciation

This is to certify that Dr./Mr./Ms. Mubeen Ahmed Khan, Dayananda Sagar University, South Bengaluru, Karnataka, served as a Reviewer for the 7th International Conference on Machine Learning, Image Processing, Network Security and Data Sciences (MIND-2025), held during 12th – 14th December 2025 at Malaviya National Institute of Technology (MNIT), Jaipur, India.

The Organizing Committee of MIND-2025 gratefully acknowledges and appreciates the reviewer's valuable time, expertise, and commitment toward maintaining high scholarly standards of the conference.

Dr. Gyanendra Kumar Verma
Conference Chair, MIND-2025

Dr. Rajesh Doriya
Secretary, MIND-2025

Dr. Devi Priya V. S
Assistant Professor
Department of CSE (Cyber Security)

Dr. Devi Priya V S successfully participated in a 6-Day Faculty Development Programme (FDP) titled “Transformers to Agentic AI: Building and Deploying Generative AI Solutions.”

The FDP was organized by the Department of Computer Science and Engineering, Mar Baselios College of Engineering and Technology (Autonomous), Thiruvananthapuram, and was conducted from 1st to 6th December 2025. The program focused on advanced concepts in transformer architectures, agentic AI systems, and the development and deployment of generative AI solutions.

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COLLEGE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS

Certificate of Participation

This certificate is proudly awarded to

Dr. V. S. Devipriya

of

Dayananda Sagar University

for the successful participation in the 6-Day Faculty Development Programme on “Transformers to Agentic AI: Building and Deploying Generative AI Solutions”, organized by the Department of Computer Science and Engineering, Mar Baselios College of Engineering and Technology (Autonomous), Mar Ivanios Vidya Nagar, Thiruvananthapuram held from 1st to 6th December 2025.

Dr. Jisha John
HoD, Dept of CSE, MBCET

Dr. S. Viswanatha Rao
Principal, MBCET

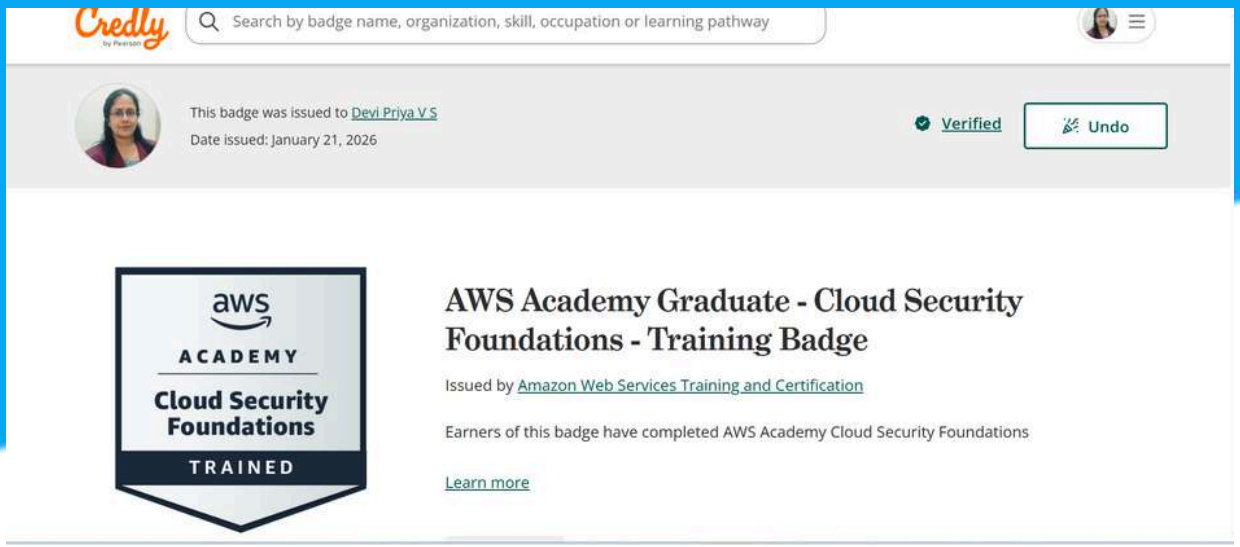
Dr. Devi Priya V. S
Assistant Professor
Department of CSE (Cyber Security)

Dr.Devi Priya V S successfully completed the “Yuva AI for All” program, an initiative under INDIAai in collaboration with NASSCOM FutureSkills Prime and IT-ITeS Sector Skills Council.

The program, issued on 13 January 2026, focused on building foundational awareness and competencies in Artificial Intelligence, aligning participants with national digital skilling objectives under the MeitY–NASSCOM Digital Skilling Initiative.

Dr. Devi Priya V. S
Assistant Professor
Department of CSE (Cyber Security)

Dr. Devi Priya V S has successfully earned the AWS Academy Graduate – Cloud Security Foundations training badge, issued by Amazon Web Services (AWS) Training and Certification on 21 January 2026.



Dr. Devi Priya V. S
Assistant Professor
Department of CSE (Cyber Security)

Dr. V. S. Devi Priya successfully participated in a 2-Day International Workshop titled “AI Tools for Research and Academic Writing”, organized by Manuscriptpedia, Kanniyakumari, and conducted in online mode on 24th and 25th January 2026.

Dr. D. Sumathi
Professor
Department of CSE (Cyber Security)

Dr. Sumathi D, has successfully participated in and completed the AICTE Training and Learning (ATAL) Academy Faculty Development Program on "Quantum Communication: Recent Progress and Future Research Direction."

The FDP was conducted at the National Institute of Technology (NIT), Tiruchirappalli, from 19th January 2026 to 24th January 2026, under the aegis of the All India Council for Technical Education (AICTE).

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AICTE Training and Learning (ATAL) Academy

Certificate

It is certified that ***Dr. SUMATHI D, Professor*** *of* ***DEPT OF CSE(CYBER SECURITY),SCHOOL OF ENGINEERING, DAYANANDA SAGAR UNIVERSITY,BANGALORE*** *has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on* ***Quantum Communication: Recent Progress and Future Research Direction*** *at* ***National Institute of Technology, Tiruchirappalli*** *from* ***19/01/2026*** *to* ***24/01/2026.***

[redacted]

Sudharsan Parthasarathy
Assistant Professor Level (AICTE Institute), Coordinator
National Institute of Technology, Tiruchirappalli

Dr. Sunil Luthra
Director & Bureau Head
Training and Learning Bureau, AICTE

Dr. Shashidhara L. C.
Assistant Professor
Department of Mechanical Engg.

Dr. Saravana Bavan D
Associate Prof. and Chairperson
Department of Mechanical Engg.

Dr. Rajeev Kumar Gupta
Assistant Professor
Department of Mechanical Engg.

Dr. Shashidhara L. C. (Assistant Professor) along with Dr. Saravana Bavan (Associate Professor) and Dr. Rajeev Kumar Gupta (Assistant Professor), Mechanical Engineering Department have published a Q1 research article in the reputed Elsevier journal Theoretical and Applied Fracture Mechanics (Volume 143, 2026). The study examines the mixed-mode (I/II) fracture behaviour of banana fiber reinforced epoxy composites using asymmetric semi-circular bend specimens, providing experimental and criterion-based insights into fracture toughness and crack initiation. DOI: https://doi.org/10.1016/j.tafmec.2025.105433.

Theoretical and Applied Fracture Mechanics is a high-ranking Q1 Elsevier journal focusing on the mechanics of materials and structures under various loading conditions. With an impact factor of 5.7 and a Cite Score of 8.4, the journal is highly regarded for publishing impactful research in fracture mechanics, stress intensity factors, and fatigue, underscoring the significance of this publication.

Theoretical and Applied Fracture Mechanics 143 (2026) 105433

Contents lists available at ScienceDirect

Theoretical and Applied Fracture Mechanics

journal homepage: www.elsevier.com/locate/tafmec

Mixed-mode(I/II) fracture behaviour and criterion-based analysis of banana fiber reinforced epoxy composites using asymmetric SCB specimens

L.C. Shashidhar [a,*], Saravanabavan [a], Rajeev Kumar Gupta [a], S.C. Ramesh Kumar [b], R. Vara Prasad Kaviti [c], M.A. Umarfarooq [d,*], Vinayak S. Uppin [e], B.H. Maruthi Prashanth [f]

[a] Department of Mechanical Engineering, Dayananda Sagar University, Bengaluru, Karnataka 562112, India
[b] Department of Mechanical Engineering, REVA University, Yelahanka, Kattigenahalli, Bengaluru, Karnataka 560064, India
[c] Department of Mechanical Engineering, Brindavan College of Engineering, Bagalur Main Road, Yelahanka, Bengaluru 560063, India
[d] Center for Material Science, Department of Mechanical Engineering, Karpagam Academy of Higher Education, Coimbatore - 641 021, Tamil Nadu, India
[e] Department of Mechanical Engineering, SDM College of Engineering and Technology, Dharwad 580002, Karnataka, India
[f] Department of Mechanical Engineering, AGM Rural College of Engineering and Technology (Affiliated to VTU, Belgavi), Varur, Hubli, Karnataka, India

ARTICLE INFO

Keywords:
Banana fiber-epoxy composites
Mixed-mode fracture toughness
Asymmetric semi-circular bend (ASCB)
Crack initiation angle

ABSTRACT

This work investigates the mixed-mode (I/II) fracture behaviour of banana fiber-reinforced epoxy composite using asymmetric semi-circular bend (ASCB) specimens. Laminates were fabricated via hand layup-assisted vacuum bag moulding, with banana fibers integrated into an epoxy matrix. Three-point bending tests were conducted on ASCB specimens (radius 60 mm, thickness 6 mm, and notch length 30 mm) under varying asymmetric support spans (40–40 mm to 40–20 mm) to transition from pure mode I to mixed-mode I/II loading. Results showed a non-monotonic mode I fracture toughness (K_I) trend (1.70 MPa.$m^{1/2}$ decreasing to 1.54 MPa.$m^{1/2}$, then increasing to 1.92 MPa.$m^{1/2}$) and rising mode II fracture toughness (K_{II}) (0.30 to 0.87 MPa.$m^{1/2}$) with increasing mode II contribution, attributed to fiber-matrix interactions.

Experimental results were compared with analytical predictions based on the Power Law, maximum tangential stress (MTS), generalised maximum tangential stress (GMTS), and maximum energy release rate (Gmax) criteria. The Power Law criterion underestimated fracture resistance failing to capture constraint effects and fiber-related toughening. Incorporation of T-stress in the MTS and GMTS models improved predictions, though both overestimated crack initiation angles. Among the compared criteria, Gmax provided the closest correlation with crack initiation angles (0° to −17.26°), highlighting its suitability for natural fiber composites. Overall, the findings reveal a strong dependence of mixed-mode fracture behaviour on fiber-matrix interaction mechanisms, confirming the suitability of energy-based criteria for accurately modelling the fracture response of anisotropic natural fiber composites.

1. Introduction

The increasing demand for sustainable and eco-friendly materials in engineering applications has driven significant research into natural fiber-reinforced composites (NFRCs), which offer a renewable and biodegradable alternative to synthetic fiber-based composites [1–3]. As industries increasingly prioritise environmental sustainability, NFRCs have gained attention for their potential applications in automotive, construction and aerospace sectors [4,5]. Among the various natural fibers, banana fibers derived from the pseudo-stem of the Musa species have emerged as a promising reinforcement material due to their abundance, low cost, lightweight nature, and favourable mechanical properties [6,7]. However, the fracture behaviour of these composites remains a relatively unexplored area, particularly under mixed-mode (I/II) loading that plays a vital role in determining their structural reliability.

The resistance to crack propagation under the mechanical loading is characterised by a material property known as fracture toughness. Based on the nature of stress at the crack tip, there are basically three basic modes of fracture: mode I (Tensile load), mode II (Shear load) and mode III (Tearing load). While the numerous studies have investigated the fracture behaviour of banana fiber composites under pure tensile

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E-mail addresses: shashidhar-me@dsu.edu.in (L.C. Shashidhar), umarfarooq.ma@gmail.com (M.A. Umarfarooq).

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Received 29 October 2025; Received in revised form 20 December 2025; Accepted 30 December 2025
Available online 2 January 2026
0167-8442/© 2025 Elsevier Ltd. All rights are reserved, including those for text and data mining, AI training, and similar technologies.

Dr. Saravana Bavan D
Associate Professor and Chairperson
Department of Mechanical Engineering

Dr. Saravana bavan, Associate Professor Participated on A Five-Day online Faculty Development Program on "Advanced Manufacturing and Materials Systems: Processing, Characterization and Testing" (AMMS'26), conducted by Dept. of Mechanical Engg, Ramco Institute of Technology, Rajapalayam, Tamilnadu during 5-9, January 2026.

RAMCO INSTITUTE OF TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)
Approved by AICTE, New Delhi & Affiliated to Anna University
NAAC Accredited with 'A+' Grade & An ISO 9001: 2015 Certified Institution
NBA Accredited UG Programs: Civil, CSE, EEE, ECE and MECH
Rajapalayam – 626117

Participant ID: AMMS228

DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE OF PARTICIPATION

This is to certify that DR. SARAVANA BAVAN, ASSOCIATE PROFESSOR, from DAYANANDA SAGAR UNIVERSITY, BENGALURU, KARNATAKA has participated in A Five-Day online Faculty Development Program on "Advanced Manufacturing and Materials Systems: Processing, Characterization and Testing" (AMMS'26) organized by Department of Mechanical Engineering , Ramco Institute of Technology, Rajapalayam, Tamil Nadu, India, during 5th – 9th January, 2026.

Mr. C. Gururaj, AP/Mech. — Dr. G. Prabu ram, ASP/Mech. — Coordinator(s)
Dr. S. Maharajan, ASP/Mech. — Convenor
Dr. S. Rajakarunakaran, HoD/Mech. & Vice-Principal — Patron
Dr. L. Ganesan, Principal — Chief Patron

Dr. Shashidhara L. C.
Assistant Professor
Department of Mechanical Engineering

Dr. Naseem Khayum
Assistant Professor
Department of Mechanical Engineering

Faculty member from the Department of Mechanical Engineering, Dr. Shashidhar L C and Dr. Naseem Khayum attended the TechPulse FY26 Faculty Development Program (FDP) organized by Tata Technologies, held from 19th to 23rd January 2026 at Tata Technologies, Hinjewadi Phase-1, Pune. This five-day FDP was conducted as part of Tata Technologies' early engagement initiative aimed at strengthening academia–industry collaboration and bridging academic learning with industry-relevant technologies. The program facilitated meaningful interaction with industry experts and provided valuable insights into current industrial practices.

Under the Mechanical Engineering track, the FDP covered Automotive Engineering Essentials and Automotive Engineering and Simulation Fundamentals. The sessions focused on contemporary automotive systems, engineering workflows, and simulation-based approaches widely used in the automotive industry. Participation in this FDP enhanced practical understanding of emerging technologies and industry processes, which will contribute to curriculum enrichment, improved teaching–learning methodologies, and better alignment of academic programs with industry expectations.


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Certificate of Participation
is awarded to
Dr. Naseem Khayum
in recognition of the active participation in "TechPulse – Early Engagement Program" FDP 2026, organized during 19th January 2026 to 23rd January 2026 at Tata Technologies, Pune
Chief Human Resources Officer
Date : 23rd January 2026
/// Engineering a better world


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TATA TECHNOLOGIES

Dr. Ravitej Y P
Assistant Professor
Department of Mechanical Engineering

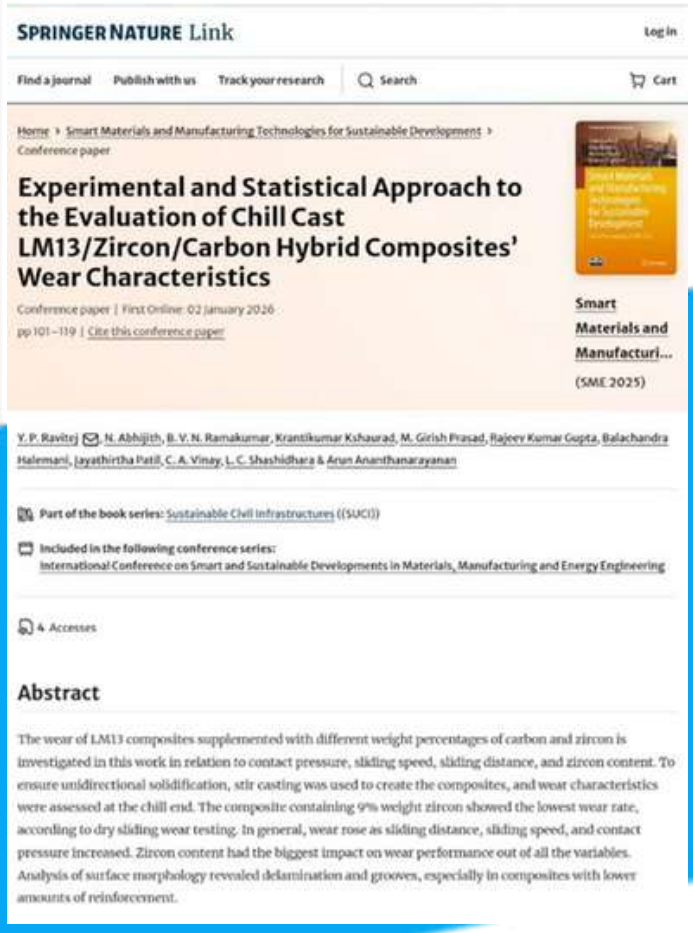
Dr. Ravitej Y P, Assistant Professor, Mechanical Engineering Department, DSU participated in the AICTE Training and Learning Academy (ATAL)–sponsored One Week Faculty Development Programme on “Application of Artificial Intelligence & Machine Learning Techniques in 3D Printing for Next-Gen Materials & Industry 4.0/5.0”, held from 19–24 January 2026 at K. S. Institute of Technology, Bengaluru. The FDP provided in-depth exposure to emerging AI–ML tools applied to additive manufacturing, smart materials, and advanced mechanical engineering applications. Through expert lectures, interactive sessions, and practical discussions, the programme strengthened interdisciplinary knowledge and enhanced research and teaching capabilities aligned with Industry 4.0/5.0 trends.

Dr. Ravitej Y P
Assistant Professor
Department of Mechanical Engineering

Dr. Rajeev Kumar Gupta
Assistant Professor
Department of Mechanical Engineering

Dr. Ravitej Y P and Dr. Rajeev Kumar Gupta, Assistant Professor, Mechanical Engineering Department have published two book chapters with Springer Nature in the volume Smart Materials and Manufacturing Technologies for Sustainable Development (SME 2025). The chapters present experimental investigations on the wear behavior of aluminum-based metal matrix composites fabricated using stir casting techniques. One study focuses on LM13/Zircon/Carbon hybrid composites, employing statistical analysis to identify the influence of reinforcement content on wear characteristics. The second chapter examines the impact of wear parameters and heat treatment on Al7075–AlN composites, demonstrating enhanced wear resistance in heat-treated materials. These contributions highlight Dr. Ravitej's research in advanced materials, tribology, and sustainable manufacturing technologies.

They also published a research article in the European Journal of Materials on optimizing Al7075–AlN composites. The study integrates experiments, statistical analysis, and machine learning to enhance heat-treatment parameters and improve composite performance.



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Home › Smart Materials and Manufacturing Technologies for Sustainable Development › Conference paper

Experimental and Statistical Approach to the Evaluation of Chill Cast LM13/Zircon/Carbon Hybrid Composites' Wear Characteristics

Conference paper | First Online: 02 January 2026

pp 101–119 | Cite this conference paper

Smart Materials and Manufacturi... (SME 2025)

Y. P. Ravitej, N. Abhijith, B. V. N. Ramakumar, Krantikumar Kshaurad, M. Girish Prasad, Rajeev Kumar Gupta, Balachandra Halemani, Jayathirtha Patil, C. A. Vinay, L. C. Shashidhara & Arun Ananthanarayanan

Part of the book series: Sustainable Civil Infrastructures ((SUCI))

Included in the following conference series: International Conferecce on Smart and Sustainable Developments in Materials, Manufacturing and Energy Engineering

4 Accesses

Abstract

The wear of LM13 composites supplemented with different weight percentages of carbon and zircon is investigated in this work in relation to contact pressure, sliding speed, sliding distance, and zircon content. To ensure unidirectional solidification, stir casting was used to create the composites, and wear characteristics were assessed at the chill end. The composite containing 9% weight zircon showed the lowest wear rate, according to dry sliding wear testing. In general, wear rose as sliding distance, sliding speed, and contact pressure increased. Zircon content had the biggest impact on wear performance out of all the variables. Analysis of surface morphology revealed delamination and grooves, especially in composites with lower amounts of reinforcement.

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Home › Smart Materials and Manufacturing Technologies for Sustainable Development › Conference paper

Impact of Wear Parameters and Heat Treatment on the Wear Rate of Aluminum Alloy/Al Nitride Composite: An Experimental Approach

Conference paper | First Online: 02 January 2026

pp 87–99 | Cite this conference paper

Smart Materials and Manufacturi... (SME 2025)

Y. P. Ravitej, T. L. Annapoorna, Batluri Tilak Chandra, M. Girish Prasad, Rajeev Kumar Gupta, Krantikumar Kshaurad, G. N. Thirumala, L. Deva, Shanshank A. Ghokhale & Punith S. Kalyankar

Part of the book series: Sustainable Civil Infrastructures ((SUCI))

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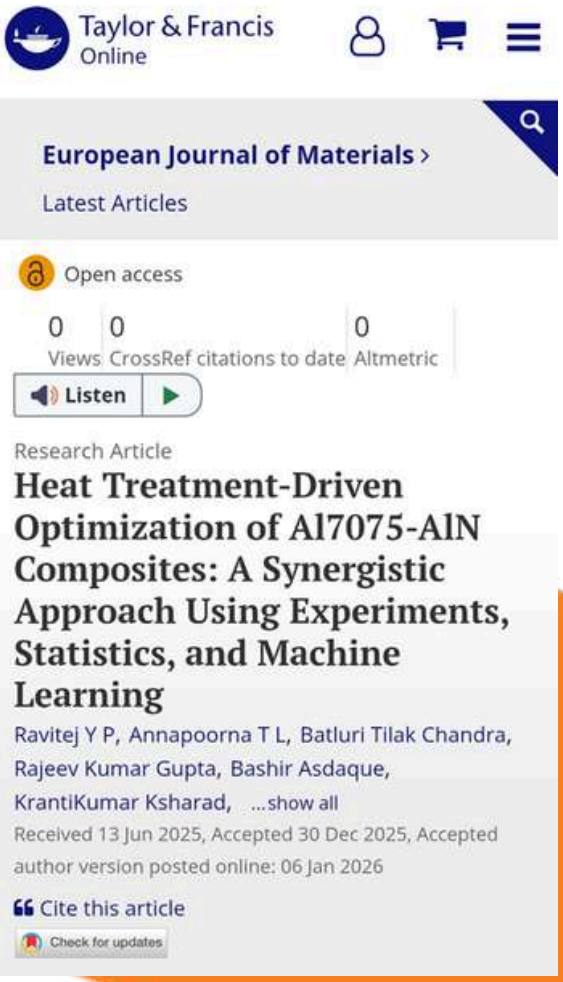
4 Accesses

Abstract

This study examines the wear behavior of Al7075 aluminum alloy reinforced with varying weight percentages (2–8 wt%) of aluminum nitride (AlN), produced through stir casting. Both heat-treated and non-heat-treated specimens were tested under different wear conditions by independently varying the applied load, sliding velocity, and sliding distance. The findings indicate that the wear rate increases with greater load and sliding distance, but decreases at higher sliding velocities. Heat-treated composites demonstrated enhanced wear resistance compared to their non-heat-treated counterparts, which is attributed to improved microstructural stability. Mass loss measured wear, and worn surfaces were analyzed using optical microscopy and XRD. A composite connecting rod was fabricated from the optimized composition and examined for microstructural integrity. The findings confirm that AlN reinforcement and heat treatment effectively enhance the wear performance of Al7071 composites.



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Research Article

Heat Treatment-Driven Optimization of Al7075-AlN Composites: A Synergistic Approach Using Experiments, Statistics, and Machine Learning

Ravitej Y P, Annapoorna T L, Batluri Tilak Chandra, Rajeev Kumar Gupta, Bashir Asdaque, KrantiKumar Ksharad, ...show all

Received 13 Jun 2025, Accepted 30 Dec 2025, Accepted author version posted online: 06 Jan 2026

Cite this article

Check for updates

Dr. Ravitej Y P
Assistant Professor
Department of Mechanical Engineering

Dr. Ravitej Y P published a research article in the Canadian Metallurgical Quarterly investigating the wear behaviour of CNT- and titanium-reinforced copper matrix composites. The study combines experimental investigations with machine learning models to accurately predict wear performance and understand reinforcement effects on tribological properties.

Dr. Saravana Bavan D
Associate Professor and Chairperson
Department of Mechanical Engineering

Dr. Vinayak B Hemadri
Professor
Department of Mechanical Engineering

Prof. Abhijith N
Assistant Professor
Department of Mechanical Engineering

Prof. Karthik S B
Assistant Professor
Department of Mechanical Engineering

Dr. Sararvana Bavan D, Dr. Vinayak B Hemadri, Prof. Abhijith Nand Prof. Karthik S B, Mechanical Engineering Department of Dayananda Sagar University, Bengaluru successfully participated in a Five-Day Faculty Development Programme titled “Next-Gen EV Innovation: A Holistic Blend of Mechanical Design, Electrical Systems, and Artificial Intelligence”, conducted from 19th to 23rd January 2026 at BMS Institute of Technology & Management, Yelahanka, Bengaluru. The programme focused on emerging trends in electric vehicle technology, integrating mechanical engineering principles, electrical and electronics systems, and AI-driven innovations. His active participation enhanced interdisciplinary knowledge and strengthened practical insights into next-generation EV design and development.

ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

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CERTIFICATE

of participation

This is to certify that

Dr./Mr./Ms./Mrs. Karthik S.B

of Dayananda Sagar University has actively participated in and successfully completed the Five-Day Faculty Development Programme on "Next-Gen EV Innovation: A Holistic Blend of Mechanical Design, Electrical Systems, and AI Intelligence", conducted from 19th to 23rd January 2026, and organized by the Departments of Mechanical Engineering and Electrical & Electronics Engineering, BMS Institute of Technology & Management, Yelahanka, Bengaluru - 560 119.

Dr. Madhu M C
HoD-ME
BMSIT&M, Bengaluru

Dr. Prashant A Athavale
HoD-EEE
BMSIT&M, Bengaluru

Dr. Sanjay H A
Principal
BMSIT&M, Bengaluru

ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

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CERTIFICATE

of participation

This is to certify that

Dr./Mr./Ms./Mrs. Abhijith N

of Dayananda Sagar University has actively participated in and successfully completed the Five-Day Faculty Development Programme on "Next-Gen EV Innovation: A Holistic Blend of Mechanical Design, Electrical Systems, and AI Intelligence", conducted from 19th to 23rd January 2026, and organized by the Departments of Mechanical Engineering and Electrical & Electronics Engineering, BMS Institute of Technology & Management, Yelahanka, Bengaluru - 560 119.

Dr. Madhu M C
HoD-ME
BMSIT&M, Bengaluru

Dr. Prashant A Athavale
HoD-EEE
BMSIT&M, Bengaluru

Dr. Sanjay H A
Principal
BMSIT&M, Bengaluru

Dr. Shreeganesh Subraya Hegde
Assistant Professor
Department of Chemistry

- Dr. Shreeganesh Subraya Hegde, Assistant Professor in the Department of Chemistry, has published a new research article titled “Enhancing the electrochemical performance of manganese oxide thin film electrodes via borax incorporation: Experimental and theoretical insights.” The work appears in the prestigious Journal of Power Sources (Q1), boasting an Impact Factor of 7.9 and a CiteScore of 14.9

Journal of Power Sources 668 (2026) 239306

Contents lists available at ScienceDirect

Journal of Power Sources

journal homepage: www.elsevier.com/locate/jpowsour

Enhancing the electrochemical performance of manganese oxide thin film electrodes via borax incorporation: Experimental and theoretical insights

A. Pramitha [a], Shreeganesh Subraya Hegde [b,c], Badekai Ramachandra Bhat [b], Vikash Mishra [a], Y.N. Sudhakar [d], Sajan D George [e], Y. Raviprakash [a,*]

[a] Department of Physics, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India
[b] Catalysis and Materials Chemistry Laboratory, Department of Chemistry, National Institute of Technology Karnataka, Surathkal, Mangalore, 575025, Karnataka, India
[c] Department of Chemistry, School of Engineering, Dayananda Sagar University, Harohalli, Bengaluru, Karnataka, 562112, India
[d] Department of Chemistry, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India
[e] Centre for Applied Nanosciences, Manipal Institute of Applied Physics, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India

HIGHLIGHTS

- Borax incorporated Mn_3O_4 electrodes were prepared by spray pyrolysis technique.
- Boron occupied the interstitial sites causing an oxygen imbalance.
- Electrode with 15 % borax showed 3-fold greater specific capacitance than pristine.
- DFT predicts increased quantum capacitance, aligning well with experimental result.

Dr. Shreeganesh Subraya Hegde
Assistant Professor
Department of Chemistry

Dr. Shreeganesh Hegde has served as a reviewer for several reputed Q1 Elsevier and Springer Nature journals, including Carbon (Impact Factor 11.6, CiteScore of 21.4), Journal of Power Sources (Impact Factor of 7.9, CiteScore of 14.9), Results in Engineering (Impact Factor 7.9, CiteScore of 14.9), Next Materials (CiteScore of 1.9), Journal of Nanoparticle Research (Impact Factor 2.6), and Nanotechnology for Environmental Engineering (CiteScore 7.7).


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in recognition of their contribution to
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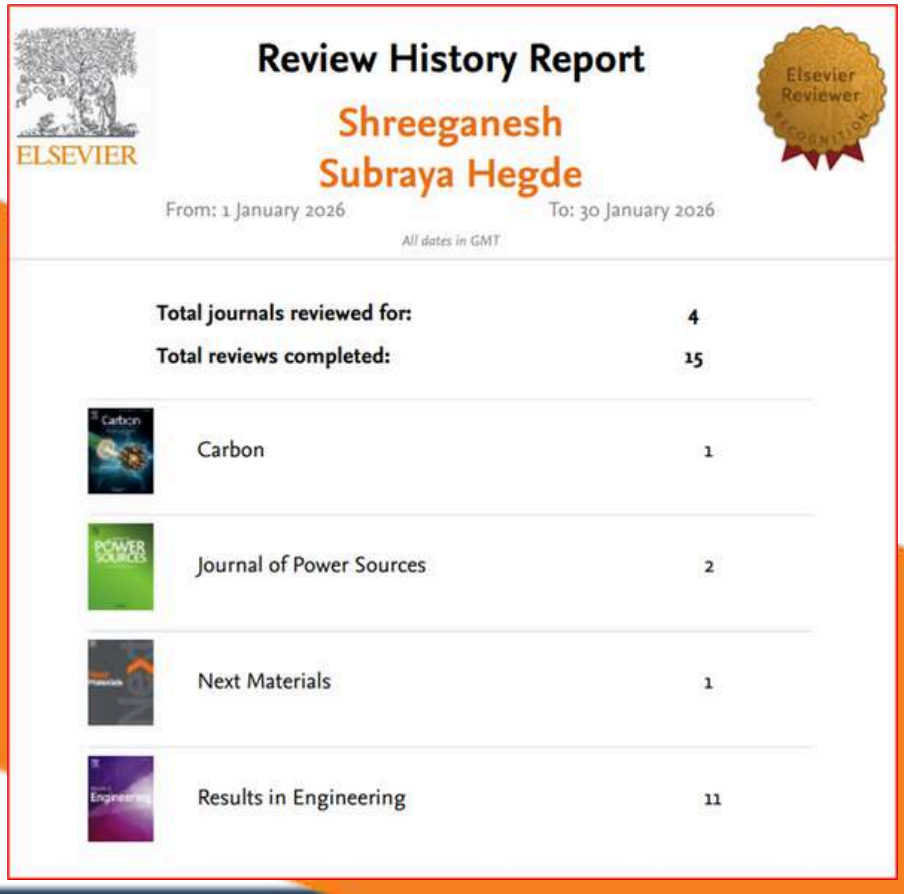
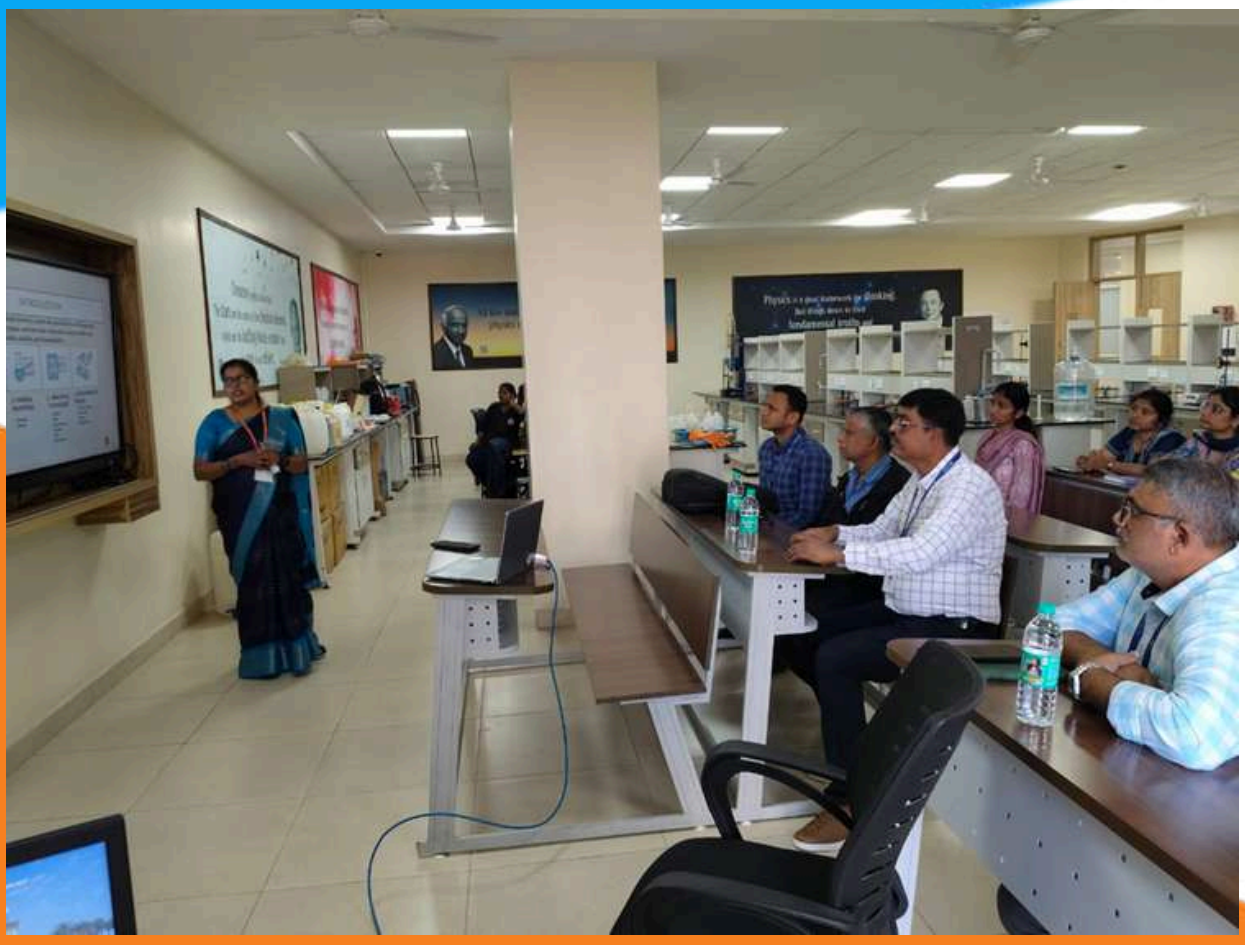

ELSEVIER
Review History Report
Shreeganesh Subraya Hegde
Elsevier Reviewer Recognition
From: 1 January 2026
To: 30 January 2026
All dates in GMT
Total journals reviewed for: 4
Total reviews completed: 15
Carbon 1
Journal of Power Sources 2
Next Materials 1
Results in Engineering 11

Dr. A V Raghu
Professor
Department of Chemistry

- The Ph.D. viva voce titled ‘Design and Development of Solid-State Form of Active Pharmaceutical Ingredient, with Comprehensive Evaluation of Their Dissolution Profiles and Biological Activities’ by Ms. Geethanjali N. K. was successfully completed on 30 January 2026, under the guidance of Dr. A. V. Raghu, with Dr. Praveen C. Ramamurthy serving as the External Examiner.



Dr. A V Raghu
Professor
Department of Chemistry

- Dr. A. V. Raghu delivered an invited talk in an ICAR-sponsored short course on ‘Emerging Trends in Nanotechnology for Dairy and Food Applications’ at the NDRI Campus on January 16, 2026, with the lecture titled ‘Nanotechnology in Drug Development: Fundamentals, Applications, and Emerging Trends.

Dr. A V Raghu
Assistant Professor
Department of Chemistry

- Dr. Manas Barai has recently published a research article entitled “Flotation separation mechanism of calcium minerals using novel synthesized amino acid based anionic collectors” in the prestigious journal Journal of Molecular Liquid (ELSEVIER) on 24 January 2025. J. Mol. Liq. is a well-recognised international journal with an Impact Factor of 5.40, Q1. The journal is widely indexed in major scientific databases, including PubMed, MEDLINE, Web of Science, SCIE, Scopus, CAS, INSPEC, EBSCOHost, and Portico.

Journal of Molecular Liquids 446 (2026) 129313

Contents lists available at ScienceDirect

Journal of Molecular Liquids

journal homepage: www.elsevier.com/locate/molliq

Flotation separation mechanism of calcium minerals using novel synthesized amino acid based anionic collectors

Manas Barai [a,b,*], N.S. Venkataramanan [a]

[a] Department of Chemistry, School of Engineering, Dayananda Sagar University, Harohalli, Bangalore, Karnataka 562112, India
[b] Chemistry of Interfaces Group, Luleå University of Technology-SE-97187, Luleå, Sweden

ARTICLE INFO

Keywords:
AAS
Minerals
Adsorption
Monolayer
Multilayer
Molecular modeling and DFT

ABSTRACT

Specific separation of fluorite and phosphate ores, such as fluorite (CaF_2) and apatite ($Ca_5(PO_4)_3(OH, F, Cl)$ from carbonate ores, i.e., dolomite ($CaMg(CO_3)_2$), magnesite ($Mg(CO_3)_2$), and calcite (CaF_2) and individual separation of apatite from fluorite using *N*-dodecyl glycinate ($C_{12}GlyNa$), −aminomalonate ($C_{12}MalNa_2$), −aspartate ($C_{12}AspNa_2$), and -glutamate ($C_{12}GluNa_2$) surfaces were recorded by Hallimond tube flotation, ζ potential, UV–Vis absorbance, FTIR, molecular modeling, and DFT calculations. After carbonate mineral dissolution in collector solution, pH values changed from 2 to 7, but values remained unchanged for apatite and fluorite at a fixed 2×10^{-4} (M) concentration. With increasing the pH and concentration, recovery efficacy and negative ζ potential values increased significantly, resulting in spontaneous monolayer adsorptions. Monocarboxylate $C_{12}GlyNa$ exhibited higher but non-selective flotation across all minerals at natural and 10.5 pH. In contrast, the dicarboxylate group of $C_{12}MalNa_2$ is separated by one carbon atom, showing higher recovery for apatite and fluorite, but two and three methylene spacers, $C_{12}AspNa_2$ and $C_{12}GluNa_2$ exhibit approximately two-time higher O—O distances than the M-M distance of apatite, but this distance is nicely matched with fluorite, resulting in higher flotation for fluorite than apatite. Calcite-coated $C_{12}MalNa_2$ did not show flotation because one Ca metal electrostatically interacted with one -$(COO)^-$ unit; on the other hand, apatite exhibited higher recovery due to the spontaneous monolayer adsorption through electrostatic interactions between Ca—Ca with two -$(COO)^-$ units, resulting in apatite separation from calcite. The amount of collector remaining in solution after adsorption values were measured by UV–Vis spectroscopy. With varying concentration and pH at a fixed 2×10^{-4} M, surface adsorption rates were scrutinized by area under the alkyl -(CH_2) stretching absorption band at (2993–2967 cm^{-1}) and (2895–2810 cm^{-1}) by FTIR. Molecular modeling and DFT calculations were used to expose the adsorption mechanism of amino acid-based collectors on mineral surfaces to improve recovery efficiency.

Dr. Bhavana Rikhari
Assistant Professor
Department of Chemistry

- Bhavana Rikhari published A Review on “Progress in eco-friendly aerospace coatings: the future beyond chromates” Journal of Electrochemical Science and Engineering (2026), 2775-2775. (Q2, Impact factor – 2.6)

J. Electrochem. Sci. Eng. ***00(0)*** *(2026) 2775; https://doi.org/10.5599/jese.2775*

Open Access : : ISSN 1847-9286
www.jESE-online.org

Review paper

Progress in eco-friendly aerospace coatings: the future beyond chromates

Bhavana Rikhari[1], Gururaj Kudur Jayaprakash[2] and P. Amaravathy[3]

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[2]*Department of Chemistry, Nitte Meenakshi Institute of Technology, NITTE (Deemed to be University), Bangalore, Karnataka, India*
[3]*Chemomicrobiomics Laboratory, KMCH Research Foundation, Coimbatore, India*

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Received: April 29, 2025; Revised: January 12, 2026; Published: January 20, 2026

Abstract

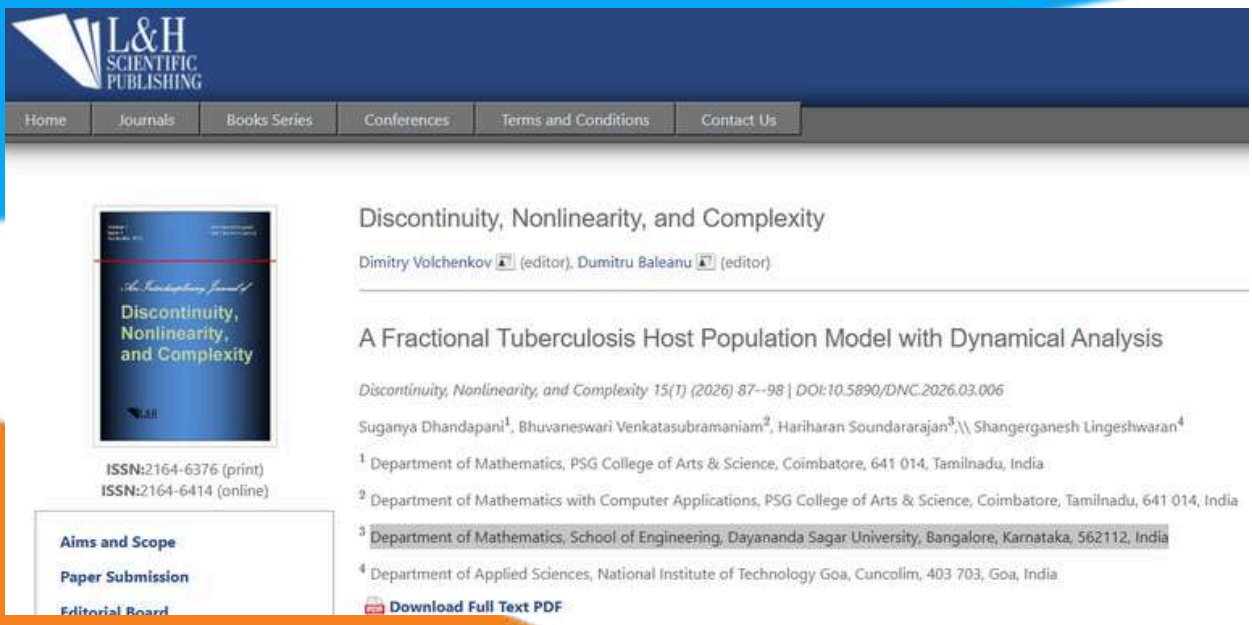
Aluminium alloys have a good strength-to-weight ratio and low density, but they are not impervious to corrosion. Therefore, it is necessary to evaluate their corrosion performance in the atmospheric

Dr. Srikumar
Associate Professor
Department of Mathematics

- Dr. Srikumar published the research article entitled “Numerical Approaches to HIV/AIDS Dynamics: A SIAT Model Study“ in the journal Advances in Nonlinear Analysis and Applications, published by Boletim da Sociedade Paranaense de Mathematica on 21 Jan 2026, Date of Submission: Sep 2025, ISSN: 2175-1188, H-Index: 22, Indexation: DOAJ, CISTI, SCOPUS, Latindex, Base Bielefeld, Emerging Science Citation Index (ESCI) from Web Of Science, Scopus Q3 , Vol. 43 Issue 2 (2025), Journal Impact Factor: 0.40.
Link:https://periodicos.uem.br/ojs/index.php/BSocParanMat/issue/view/2238

Dr. Hari Haran
Assistant Professor
Department of Mathematics

- Dr. Hari Haran published the research article entitled “A fractional tuberculosis host population model with dynamical analysis” in the journal Journal of Discontinuity, Nonlinearity, and Complexity , published by L & H Scientific Publishing on 1st Jan 2026. ISSN: 2164-6376, 2164-6414, H-Index: 15, Scopus indexed Q3 journal, Journal Impact Factor: 0.883 and DOI: 10.5890-DNC.2026.03.006.



Prof. Manoj Solanki
Assistant Professor
Department of Mathematics

- Prof. Manoj Solanki attended 6 Days Pedagogical training for mathematics teachers (PTMT) funded by National board of higher mathematics (NBHM) under MTTS trust at National Insitiute of Technology, Warangal (NITW) from 29 Dec 2025 to 3rd Jan 2026.

Pedagogical Training for Mathematics Teachers
(PTMT) 2025
National Institute of Technology Warangal

MTTS TRUST

Organized under the aegis of MTTS Trust
Funded by National Board for Higher Mathematics

Participation Certificate

This is to certify that ***Mr. Manoj Solanki*** of *Dayananda Sagar University Bengaluru* participated in the ***Pedagogical Training for Mathematics Teachers on Linear Algebra*** held at the National Institute of Technology Warangal (NITW), Warangal, Telangana from **29/12/2025** to **03/01/2026**.

H P Rani
Local Coordinator
NIT Warangal

S Kumaresan
Director
MTTS Programmes

SCHOOL OF
ENGINEERING

STUDENT ACHIEVEMENTS

- Mr. Paran Kumar G.R(ENG23CS0131), 3rd year CSE student, DSU as a Team Vada Gopal as has secured First Place at CRACK-A-THON 2026 with cash prize of Rs. 5000, for the project title “AuraWellness: AI-Powered Clinical Mental Health Platform for Hospitals”, organised by GDG On Campus Presidency University, for their exceptional innovation and technical excellence during 12th January 2026.

- Mr. Arighna Chowdhury (ENG23CS0265), 3rd year CSE student, has received a Gold Award in the 87th Future Star Artist – National Online Art Exhibition & Competition, organized by Manikarnika Art Gallery, held from 23rd December 2025 to 2nd January 2026.

Reg. No.JHA/07270/2020-2021

Manikarnika Art Gallery

PRESENTS

Certificate

Of Award

THIS IS TO CERTIFY THAT MR./ SMT./ MISS/ DR.

ARIGHNA CHOWDHURY,BENGALURU, KARNATAKA

HAS PARTICIPATED & AWARDED IN 87TH FUTURE STAR ARTIST NATIONAL ONLINE ART EXHIBITION & COMPETITION 2026

AND WON Gold AWARD IN CATEGORY OF Upcoming STAR ARTIST

87th Future Star Artist

National Online Art Exhibition & Competition

23rd December - 02nd January - 2026

02nd January 2026
Date

KAMINI BAGHEL
(PRESIDENT & DIRECTOR)

- Ms. Harshitha P G (ENG22CS0319), Ms. Sharon Zachariah (ENG22CS0588), Ms. Shreya Paul (ENG22CS0458), and Ms. Vishaka Biju(ENG22CS0502), 4th year CSE students under the guidance of Dr. Meenakshi Malhotra, Associate Professor, Department of CSE presented a research paper- “Machine Learning Models for Emotion Prediction using Eyegaze Features” in the conference, “2026 International Conference on Smart Futuristic Technology (ICSFT)” held on 2nd and 3rd of January, 2026.

2026 International Conference on
Smart Futuristic Technology
(ICSFT)

2nd – 3rd January, 2026

Certificate

This is to certify that Dr./Prof./Mr./Ms. Shreya Paul has presented paper entitled Machine Learning Models for Emotion Prediction Using Eye-Gaze Features in 2026 International Conference on Smart Futuristic Technology (ICSFT) during 02nd to 3rd January 2026.

Dr. N S Kumar
General Chair

Dr. Dilshad Begum
Organizing Chair

2026 International Conference on
Smart Futuristic Technology
(ICSFT)

2nd – 3rd January, 2026

Certificate

This is to certify that Dr./Prof./Mr./Ms. Meenakshi Malhotra has presented paper entitled Machine Learning Models for Emotion Prediction Using Eye-Gaze Features in 2026 International Conference on Smart Futuristic Technology (ICSFT) during 02nd to 3rd January 2026.

Dr. N S Kumar
General Chair

Dr. Dilshad Begum
Organizing Chair

2026 International Conference on
Smart Futuristic Technology
(ICSFT)

2nd – 3rd January, 2026

Certificate

This is to certify that Dr./Prof./Mr./Ms. Sharon Zachariah has presented paper entitled Machine Learning Models for Emotion Prediction Using Eye-Gaze Features in 2026 International Conference on Smart Futuristic Technology (ICSFT) during 02nd to 3rd January 2026.

Dr. N S Kumar
General Chair

Dr. Dilshad Begum
Organizing Chair

- Mr. Shivam Saxena(ENG24CS0652), 2nd year CSE student, participated as team Avakaya and won 1st place with cash prize of Rs.15000 in the IIT Hyderabad for the drone challenge competition as a part of Elan and nVision 2026 during 11th January 2026.

- Mr. Prajwal B R(ENG22CS0121), Ms. Ananyaa Iyengar A S (ENG22CS0524), Ms. Harshitha S (ENG22CS0069), 4th year CSE students under the guidance of Prof. Mala B A, Prof. Bharath M B, Assistant Professors, Department of CSE has successfully delivered an oral presentation for the paper entitled “MediTrustChain: Advancing Healthcare Integrity through AI-Driven Blockchain Solutions” at the 6th International Conference on Artificial Intelligence and Smart Energy (ICAIS 2026) JCT College of Engineering and Technology, Coimbatore, India. 29-30, January 2026.

Springer ICAIS JCT College of Engineering and Technology NAAC A

CERTIFICATE OF PRESENTATION

This certificate is awarded to

Prajwal B R

who has successfully delivered an oral presentation for the paper entitled

MediTrustChain: Advancing Healthcare Integrity through AI-Driven Blockchain Solutions

at the

6th International Conference on Artificial Intelligence and Smart Energy (ICAIS 2026)

JCT College of Engineering and Technology, Coimbatore, India.

29-30, January 2026

Session Chair | Dr B Balraj, Organising Chair | Dr. S. Manoharan, Principal

Springer ICAIS JCT College of Engineering and Technology NAAC A

CERTIFICATE OF PRESENTATION

This certificate is awarded to

Ananyaa Iyengar A S

who has successfully delivered an oral presentation for the paper entitled

MediTrustChain: Advancing Healthcare Integrity through AI-Driven Blockchain Solutions

at the

6th International Conference on Artificial Intelligence and Smart Energy (ICAIS 2026)

JCT College of Engineering and Technology, Coimbatore, India.

29-30, January 2026

Session Chair | Dr B Balraj, Organising Chair | Dr. S. Manoharan, Principal

Springer ICAIS JCT College of Engineering and Technology NBA SAAC A

CERTIFICATE OF PRESENTATION

This certificate is awarded to

Harshitha S

who has successfully delivered an oral presentation for the paper entitled

MediTrustChain: Advancing Healthcare Integrity through AI-Driven Blockchain Solutions

at the

6th International Conference on Artificial Intelligence and Smart Energy
(ICAIS 2026)
JCT College of Engineering and Technology, Coimbatore, India.
29-30, January 2026

Session Chair | Dr B Balraj, Organising Chair | Dr. S. Manoharan, Principal

Springer ICAIS JCT College of Engineering and Technology NBA SAAC A

CERTIFICATE OF PRESENTATION

This certificate is awarded to

Mala B A

who has successfully delivered an oral presentation for the paper entitled

MediTrustChain: Advancing Healthcare Integrity through AI-Driven Blockchain Solutions

at the

6th International Conference on Artificial Intelligence and Smart Energy
(ICAIS 2026)
JCT College of Engineering and Technology, Coimbatore, India.
29-30, January 2026

Springer ICAIS JCT College of Engineering and Technology NBA SAAC A

CERTIFICATE OF PRESENTATION

This certificate is awarded to

Bharath M B

who has successfully delivered an oral presentation for the paper entitled

MediTrustChain: Advancing Healthcare Integrity through AI-Driven Blockchain Solutions

at the

6th International Conference on Artificial Intelligence and Smart Energy
(ICAIS 2026)
JCT College of Engineering and Technology, Coimbatore, India.
29-30, January 2026

Session Chair | Dr B Balraj, Organising Chair | Dr. S. Manoharan, Principal

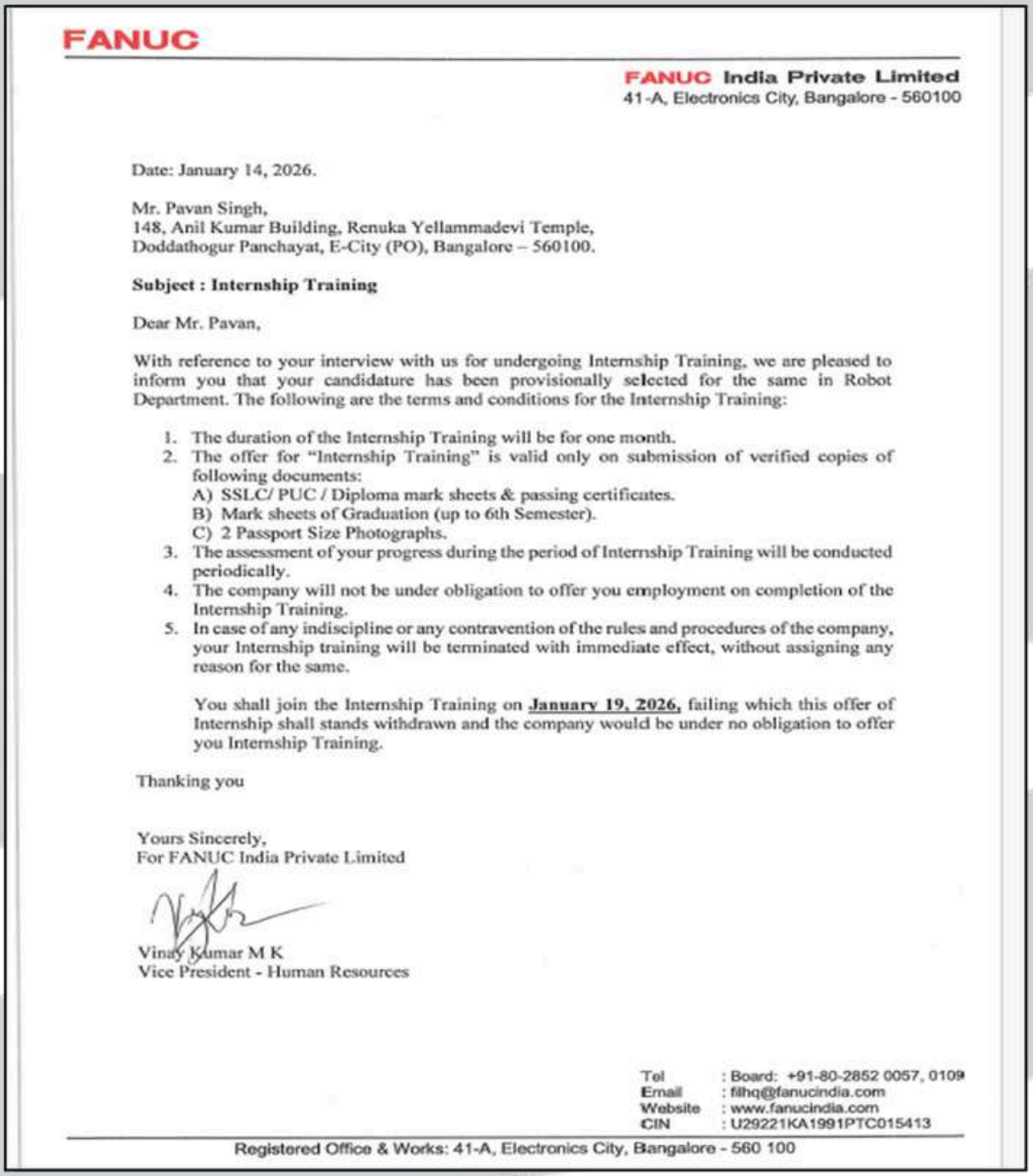
- Mr. Sidmal Madhan (ENG23CS0189), Ms. Trisha H C (ENG24CS3001), Ms. Geethashree K (ENG23CS0559), 3rd year CSE Students has a team Best Shot participated and won first prize with Cash prize 15K for the Project name : Jeeva Dhara, Domain : Sustainability, organized by VIVITSU hackathon at Hyderabad during 30th and 31st January 2026.

- Ms. Z Barkath Nisha (ENG23CS0235), Ms. Chandana R (ENG23CS0537), Ms. Abburi Manasa (ENG23CS0240), 3rd year CSE Students has a team Pseudocoders participated and won runner up with Cash prize 5K for the Project name : NeuroID, Domain : Health care, organized by VIVITSU hackathon at Hyderabad during30th and 31st January 2026.

- Shashi Kumar C (ENG23DS0034), Shreya Pravin, Nainshi Tejashree, Ronak Soni, and Ridhima Jain participated in the National Innovation Challenge for Drone Application and Research (NIDAR), organized by the Drone Federation of India, held at Gautam Buddha University from January 10–16, 2026, and under the mentorship of Dr. S. G. Shaila Professor & Chairperson, Department of CSE (Data Science), Avinash Kumar Saurav, and K. Sudha Deepthi, successfully demonstrated an advanced post-disaster UAV mission involving computer vision based survivor detection, geo-tagging over a 2–3 acre area, and 200 g payload delivery, securing top positions in the business strategy pitch, jury appreciation for best design and in-house carbon fiber development, and ₹50,000 vouchers from Passenger Drone Research Ltd. (PDRL) along with complimentary professional certification access to Hexagon software.


NIDAR
NATIONAL INNOVATION CHAL E FOR
DRONE APPLICATI CH

- Mr. H Pavan Singh (USN: ENG23RA0058) has received an official Internship Training offer from FANUC India Private Limited, 41-A, Electronics City, Bangalore, vide letter dated 14 January 2026. He has been provisionally selected for the Robot Department for a duration of one month. During the internship period, the candidate's progress will be assessed periodically by the company.



FANUC

FANUC India Private Limited
41-A, Electronics City, Bangalore - 560100

Date: January 14, 2026.

Mr. Pavan Singh,
148, Anil Kumar Building, Renuka Yellammadevi Temple,
Doddathogur Panchayat, E-City (PO), Bangalore – 560100.

Subject : Internship Training

Dear Mr. Pavan,

With reference to your interview with us for undergoing Internship Training, we are pleased to inform you that your candidature has been provisionally selected for the same in Robot Department. The following are the terms and conditions for the Internship Training:

1. The duration of the Internship Training will be for one month.
2. The offer for "Internship Training" is valid only on submission of verified copies of following documents:
   A) SSLC/ PUC / Diploma mark sheets & passing certificates.
   B) Mark sheets of Graduation (up to 6th Semester).
   C) 2 Passport Size Photographs.
3. The assessment of your progress during the period of Internship Training will be conducted periodically.
4. The company will not be under obligation to offer you employment on completion of the Internship Training.
5. In case of any indiscipline or any contravention of the rules and procedures of the company, your Internship training will be terminated with immediate effect, without assigning any reason for the same.

You shall join the Internship Training on **January 19, 2026,** failing which this offer of Internship shall stands withdrawn and the company would be under no obligation to offer you Internship Training.

Thanking you

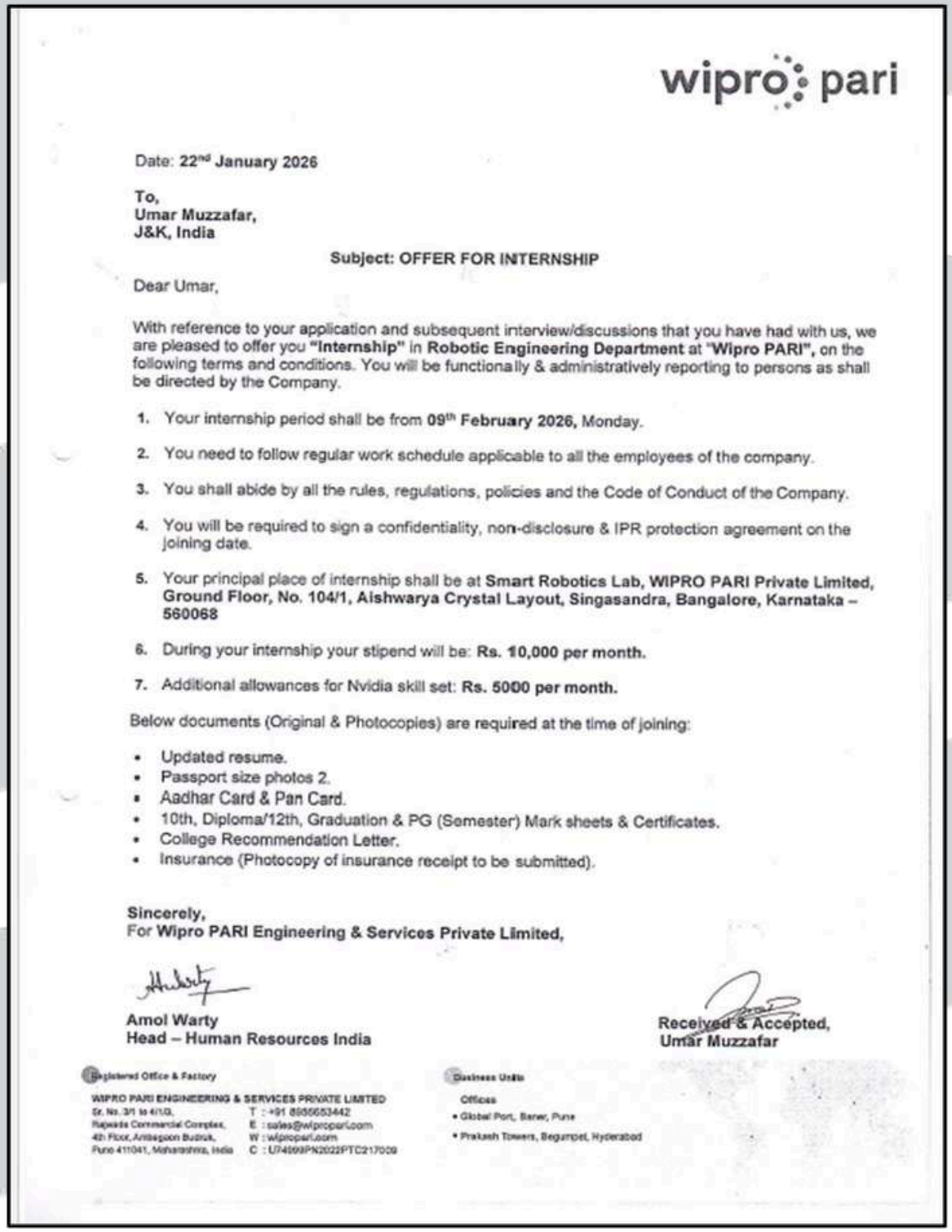
Yours Sincerely,
For FANUC India Private Limited

Vinay Kumar M K
Vice President - Human Resources

Tel : Board: +91-80-2852 0057, 0109
Email : filhq@fanucindia.com
Website : www.fanucindia.com
CIN : U29221KA1991PTC015413

Registered Office & Works: 41-A, Electronics City, Bangalore - 560 100

- Mr. Umar Bin Muzzafar (USN: ENG23RA0068) has received an Internship Offer from Wipro PARI Engineering & Services Private Limited. He has been selected for an internship in the Robotic Engineering Department at Wipro PARI, with the internship scheduled to commence from 09 February 2026 (Monday). The internship carries a stipend of Rs. 10,000 per month, along with an additional allowance of Rs. 5,000 per month for Nvidia skill set.



wipro pari

Date: 22nd January 2026

To,
Umar Muzzafar,
J&K, India

Subject: OFFER FOR INTERNSHIP

Dear Umar,

With reference to your application and subsequent interview/discussions that you have had with us, we are pleased to offer you **"Internship"** in **Robotic Engineering Department** at **"Wipro PARI"**, on the following terms and conditions. You will be functionally & administratively reporting to persons as shall be directed by the Company.

1. Your internship period shall be from **09th February 2026,** Monday.
2. You need to follow regular work schedule applicable to all the employees of the company.
3. You shall abide by all the rules, regulations, policies and the Code of Conduct of the Company.
4. You will be required to sign a confidentiality, non-disclosure & IPR protection agreement on the joining date.
5. Your principal place of internship shall be at **Smart Robotics Lab, WIPRO PARI Private Limited, Ground Floor, No. 104/1, Aishwarya Crystal Layout, Singasandra, Bangalore, Karnataka – 560068**
6. During your internship your stipend will be: **Rs. 10,000 per month.**
7. Additional allowances for Nvidia skill set: **Rs. 5000 per month.**

Below documents (Original & Photocopies) are required at the time of joining:

- Updated resume.
- Passport size photos 2.
- Aadhar Card & Pan Card.
- 10th, Diploma/12th, Graduation & PG (Semester) Mark sheets & Certificates.
- College Recommendation Letter.
- Insurance (Photocopy of insurance receipt to be submitted).

Sincerely,
For **Wipro PARI Engineering & Services Private Limited,**

Amol Warty
Head – Human Resources India

Received & Accepted,
Umar Muzzafar

Registered Office & Factory
WIPRO PARI ENGINEERING & SERVICES PRIVATE LIMITED
Sr. No. 3/1 to 4/1/3,
Rajwada Commercial Complex,
4th Floor, Ambegaon Budruk,
Pune 411041, Maharashtra, India
T : +91 8956653442
E : sales@wiproparl.com
W : wiproparl.com
C : U74999PN2022PTC217009

Business Units
Offices
• Global Port, Baner, Pune
• Prakash Towers, Begumpet, Hyderabad

- Dhivya Balakumar from Dayananda Sagar University emerged as the overall winner, showcasing exceptional technical insight and problem-solving skills in the recently concluded Quiz on Engineering & Technology brought together bright minds from leading institutions across India, celebrating innovation, knowledge, and academic excellence.

- Top grade Innovation has officially confirmed that Kruthika N will be joining the organization as an intern in the domain of Cyber Security Industrial Applications. The internship program is set to commence on February 15, 2026, and will run for a duration of two months, concluding on April 15, 2026.

TOP GRADE

Learn Today Lead Tomorrow

INTERNSHIP OFFER LETTER

18-01-2026

TO WHOM IT MAY CONCERN

This is to confirm that KRUTHIKA N will be undergoing an internship with Topgrade Innovation, commencing on 15-02-2026.

KRUTHIKA N will be pursuing his/her internship in the domain of CYBER SECURITY Industrial Applications. The internship will span a total duration of two months and is scheduled to conclude on 15-04-2026.

We are confident that KRUTHIKA N will make valuable contributions toward achieving the organization's vision during his/her tenure with us.

For any queries or further information, please feel free to contact us.

For TOPGRADE INNOVATION

Proprietor

SHYAM GANESH
CHIEF EXECUTIVE OFFICER

CONTACT US:
hr.contact@topgradeinnovations.com
8904465305
www.topgradeinnovation.com
HSR LAYOUT , EXPLOREX BUILDING,
BENGALURU,KARNATAKA- 560102

Ministry of MSME, Govt. of India

ISO 9001

- Indium Software (India) Pvt. Limited has officially extended an internship opportunity to Khyathi M R, marking a significant step in her professional journey.
- The internship commenced on January 21, 2026, at Indium's Bangalore office, with a work-from-office mode. Spanning a duration of six months, the program is designed to provide immersive industry exposure and hands-on learning experiences.
- As part of the offer, Khyathi M R will receive a monthly stipend of INR 10,000, underscoring Indium Software's commitment to supporting and nurturing emerging talent in the technology sector.

INDIUM

19-Jan-26

Dear **KHYATHI M R**,

We are pleased to offer you an internship opportunity **("Internship")** at Indium Software (India) Pvt Limited **("Indium")**. The terms and conditions of this offer are as follows and your Internship will be subjected to and governed by these terms and conditions which shall be binding upon you when you accept this offer by responding to the email carrying this offer letter ("letter").

Internship Duration	:	6 months
Internship Start Date	:	21-Jan-26
Location, Mode of Internship	:	Bangalore, Work from Office
Stipend (INR)	:	INR 10,000

Terms & Conditions:

1. Signing this offer letter will be considered as an acceptance to this Internship offer letter and its associated terms and conditions. You acknowledge that this internship is mandatory to continue employment at Indium as FTE. The purpose of this internship is to enable a learning opportunity in technology space and to gain practical experience. Indium does not derive immediate advantages from the activities performed by you during the internship duration.
2. Consistent performance in the Internship is essential throughout your internship tenure at Indium. It is essential for you to actively participate in all the learnings and relevant assignments by completing them in stipulated duration of internship.
3. The stipend is payable every month and will not form part of your cost to the company as a full-time employee. The said amount will be payable to you subject to applicable statutory and other deductions, and applicable tax withholdings. Any costs and expenses borne by you in connection with the Internship shall be your sole responsibility.
4. You may be permitted to take leaves during the Internship Duration after obtaining prior approval from your Mentor /Reporting Manager. Your stipend may be reduced if the no. of leaves is more than one day at Indium's sole discretion and option, by the period of your absence. Prolonged, frequent, or unapproved absences may lead to immediate termination of your Internship upon notice from Indium.
5. You will be an Intern (Designation – Trainee) for the Internship Duration. This Letter and the Internship Duration may be suspended, terminated, or reduced (as appropriate) immediately with notice from Indium.
6. Termination: Either party may terminate this contract by providing notice to the other party. Trainees may be required to serve a minimum of one month's notice as applicable. Yet the Company reserves the right to terminate the Internship immediately without notice in cases of performance issues, misconduct, breach of confidentiality, violation of company policies, or any act deemed detrimental to the organization. Upon termination or completion of the internship, the intern shall return all company property, documents, and

INDIUM SOFTWARE (INDIA) PRIVATE LIMITED
CIN: U72200TN1999PTC042263
Regd. Office: No.64, "Ganesh Chambers", Eldams Road, Teynampet, Chennai – 600 018
Bangalore Office: #502, 5th Floor, Southern Wing (B – Wing), Embassy Prime, Dr. APJ Abdul Kalam Road, Krishnappa Garden, C V Raman Nagar, Bengaluru – 560093

National Innovation Challenge for Drone Application and Research 2026

- Roxx Air Vehicles, the interdisciplinary team from DSU, participated in the National Innovation Challenge for Drone Application and Research (NIDAR 2026) organized by the Drone Federation of India (DFI) at Gautam Buddha University, Greater Noida, from January 10-16, 2026. The team's goal was to design and deploy a collaborative dual-drone system for post-disaster scenarios. Despite funding and supply-chain hurdles, they completed the system design and prototype assembly, excelling in the Business Strategy Pitch and Technical Design Review and earning high praise for their engineering logic. The cross-functional squad—comprising CSE, ECE, and Aerospace Engineering students—worked under mentors Dr. S.G. Shaila, Professor and Chairman Dept of Data Science Dr. Avinash Kumar Saurav, Assistant Professor Dept of Aerospace Engg, and Dr. K. Sudha Deepthi, Assistant Professor Dept of Mechanical Engg with students Shashi Kumar C (team lead), Shreya Pravin, Nainshi Tejashree, Ronak Soni, and Ridhima Jain handling roles from edge computing and data engineering to airframe design and propulsion.

One-Day Drone Workshop at GITAM University

- The students from the “Department of Aerospace Engineering, DSU”, namely Tanushree (ENG23AS0020), Jessica George (ENG23AS0004), Yashaswini U (ENG23AS0040),Tejas P Gowda (ENG23AS0021), Shivakumar (ENG24AS1001), Vijaykumar AN (ENG24AS1002) have successfully completed the One-Day Drone Workshop, a full-day hands-on training program organized as part of Prerana 2026– The Spectrum Within on on 23/1/26 . The event was a collaboration between GITAM University Science and Technology Center (GUSAC) and featured expert guidance from ISRO scientist D Naga Chandra Teja and Ms. Vidhya Cherukuru Munuswamy, Director–Directorate of Campus Life, GITAM Bengaluru, students gained solid technical knowledge, practical skills, and innovation in drone technology.

CERTIFICATE

OF PARTICIPATION

This is to certify that

Jessica W George

has successfully participated in the One-Day Drone Workshop, a full-day hands-on training program, conducted in collaboration with the GITAM University Science and Technology Center (GUSAC), held on 23 January 2026. The workshop was organised as a part of Prerana 2026 – The Spectrum Within and focused on developing technical knowledge, practical skills, and innovation in drone technology. Your outstanding performance and dedication truly reflect the spirit of Prerana 2026 – The Spectrum Within. We appreciate your enthusiasm and commitment to learning.

D Naga Chandra Teja
SCIENTIST/ENGINEER
Indian Space Research Organisation
(ISRO) - Antariksh Bhavan

Ms. Vidhya Cherukuru Munuswamy
Director-Directorate of Campus Life
GITAM (Deemed to be University),
Bengaluru

CERTIFICATE

OF PARTICIPATION

This is to certify that

Shiva Kumar N

has successfully participated in the One-Day Drone Workshop, a full-day hands-on training program, conducted in collaboration with the GITAM University Science and Technology Center (GUSAC), held on 23 January 2026. The workshop was organised as a part of Prerana 2026 – The Spectrum Within and focused on developing technical knowledge, practical skills, and innovation in drone technology. Your outstanding performance and dedication truly reflect the spirit of Prerana 2026 – The Spectrum Within. We appreciate your enthusiasm and commitment to learning.

D Naga Chandra Teja
SCIENTIST/ENGINEER
Indian Space Research Organisation
(ISRO) - Antariksh Bhavan

Ms. Vidhya Cherukuru Munuswamy
Director-Directorate of Campus Life
GITAM (Deemed to be University),
Bengaluru

CERTIFICATE

OF PARTICIPATION

This is to certify that

Tanushree S

has successfully participated in the One-Day Drone Workshop, a full-day hands-on training program, conducted in collaboration with the GITAM University Science and Technology Center (GUSAC), held on 23 January 2026. The workshop was organised as a part of Prerana 2026 – The Spectrum Within and focused on developing technical knowledge, practical skills, and innovation in drone technology. Your outstanding performance and dedication truly reflect the spirit of Prerana 2026 – The Spectrum Within. We appreciate your enthusiasm and commitment to learning.

D Naga Chandra Teja

Ms. Vidhya Cherukuru Munuswamy

CERTIFICATE

OF PARTICIPATION

This is to certify that

Gahana V

has successfully participated in the One-Day Drone Workshop, a full-day hands-on training program, conducted in collaboration with the GITAM University Science and Technology Center (GUSAC), held on 23 January 2026. The workshop was organised as a part of Prerana 2026 – The Spectrum Within and focused on developing technical knowledge, practical skills, and innovation in drone technology. Your outstanding performance and dedication truly reflect the spirit of Prerana 2026 – The Spectrum Within. We appreciate your enthusiasm and commitment to learning.

D Naga Chandra Teja
SCIENTIST/ENGINEER
Indian Space Research Organisation
(ISRO) - Antariksh Bhavan

Ms. Vidhya Cherukuru Munuswamy
Director-Directorate of Campus Life
GITAM (Deemed to be University),
Bengaluru

CERTIFICATE

OF PARTICIPATION

This is to certify that

Yashaswini U

has successfully participated in the One-Day Drone Workshop, a full-day hands-on training program, conducted in collaboration with the GITAM University Science and Technology Center (GUSAC), held on 23 January 2026. The workshop was organised as a part of Prerana 2026 – The Spectrum Within and focused on developing technical knowledge, practical skills, and innovation in drone technology. Your outstanding performance and dedication truly reflect the spirit of Prerana 2026 – The Spectrum Within. We appreciate your enthusiasm and commitment to learning.

D Naga Chandra Teja
SCIENTIST/ENGINEER
Indian Space Research Organisation
(ISRO) - Antariksh Bhavan

Ms. Vidhya Cherukuru Munuswamy
Director-Directorate of Campus Life
GITAM (Deemed to be University),
Bengaluru

CERTIFICATE

OF PARTICIPATION

This is to certify that

Tejas Gowda P

has successfully participated in the One-Day Drone Workshop, a full-day hands-on training program, conducted in collaboration with the GITAM University Science and Technology Center (GUSAC), held on 23 January 2026. The workshop was organised as a part of Prerana 2026 – The Spectrum Within and focused on developing technical knowledge, practical skills, and innovation in drone technology. Your outstanding performance and dedication truly reflect the spirit of Prerana 2026 – The Spectrum Within. We appreciate your enthusiasm and commitment to learning.

D Naga Chandra Teja
SCIENTIST/ENGINEER
Indian Space Research Organisation
(ISRO) - Antariksh Bhavan

Ms. Vidhya Cherukuru Munuswamy
Director-Directorate of Campus Life
GITAM (Deemed to be University),
Bengaluru

Karnataka Kreedakoota Gold Medal Sahana Murthy

- Sahana Murthy (ENG23AS0056), a III-year student from the *Department of Aerospace Engineering, DSU, brought home 3 medals from the Karnataka Kreedakoota 2025-26, organized by KOA in Tumkur, She won Gold in Team events and Singles category, and Silver in Doubles category, showcasing her exceptional talent and dedication.

Post-Mission Analysis (PMA) MODEL ROCKET and CANSAT

- The Model Rocketry and cansat teams namely Srilaxmi (ENG22AS0041),Krish Agarwal (ENG22AS0031) Khyathi Choubey (ENG22AS0030),Charan Raj R ((ENG23AS0002), Qasim Johar (ENG22AS0039) Barat P (ENG22AS0025), Visweshwaraj (ENG22AS0020),Sharan Murali ((ENG22AS0040),KS Rahul Bhargav (ENG22AS0027), Shrijitha (ENG23AS0019), Rishab P Badiger (ENG23AS0015),Ayan Samantha (ENG23AS0041) participated in the Post-Mission Analysis (PMA) workshop for Model Rocketry and CANSAT on Jan 23, 2026, at BMSCE, followed by an Educators Cohort Meeting and valedictory event on Jan 24, 2026, at Dassault Systèmes, Jayanagar, on the occasion of International Day of Education. Under Dr. Nagaraja S.R., Dr. Prasanthakumar H.G., and Prof. Sripad Kulkarni, DSU's CANSAT and Rocketry teams showcased skills in model rocketry & CANSAT competitions.

ISTE Global TechCon 2026

- Mr. Nikhil NP (ENG22AS0011) participated in ISTE Global TechCon 2026, presenting a paper titled "Mechanical Characterization Of Warp-Weft Aligned Basalt And Jute Fiber-Reinforced Polyester Composites" guided by Prof. Sripad Kulkarni S. The conference, held on 8th & 9th January 2026 at D. Y. Patil Agriculture & Technical University, Kolhapur, showcased innovative research in engineering technology and education.

Bharat Space Education Research Centre (BSERC) Winter Internship

- Ridhima Jain (ENG23AS0014),Nisha Rani(ENG23AS0006) from the Department of Aerospace Engineering Dayananda Sagar University has completed the DEF-SPACE Winter Internship organized by BSERC from 19 Dec 2025 to 19 Jan 2026. The internship, titled Amrit Kaal, focused on delivering STEM technology at the grassroots level to support the Viksit Bharat @2047 vision. It aimed to nurture sustained innovation and technological progress for an innovative India. The program was conducted in collaboration with initiatives like Skill India, I-STEM, and Viksit Bharat Abhiyan, inspiring candidates to drive scientific research and development.

ISDC Sproc Robotics Competition Participation

- Students from the Department of Aerospace Engineering, Dayananda Sagar University (DSU), participated in the ISDC Sproc Robotics Competition held at Manipal Institute of Technology, Udupi, Karnataka, from January 31, 2026, to February 2, 2026.The team members who represented DSU are: Mr. Nikil (ENG22AS0011), Qasim (ENG22AS0039),Mithun (ENG22AS0034),Charan Raj (ENG23AS0002),Rishab (ENG23AS0015), Ayan Samantha (ENG23AS0041).Their participation in the competition is a testament to their skills and dedication to aerospace engineering.

- Mr. Shareng S (USN: ENG23AM0275), a 6th semester C Section student of CSE (AI & ML), along with his team members Barkath Nisha (ENG23CS0235), Chandana R (ENG23CS0537), and Abburi Manasa (ENG23CS0240), secured the Second position in the VIVITSU Hackathon, held at Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), Hyderabad, on 30th and 31st January 2026. The team was awarded a cash prize of ₹5,000 in recognition of their innovative solution and technical excellence. This achievement highlights the students' problem-solving skills, teamwork, and the strong culture of innovation fostered within the CSE (AI & ML) program.

- Rohan Raj (USN: ENG23EC1002), a student of the Electronics and Communication Engineering (ECE) program, Dayananda Sagar University, Bengaluru, has been successfully placed with Taste of Mom as part of the 2026 graduating batch. The offer includes a CTC of ₹4.5 LPA along with a stipend of ₹20,000, reflecting the student's academic performance and employability skills.

Training & Placement Cell

DSU /Placement /25-26/91 Date: 13-01-2026

Congratulations

Final Selected Students List – 2026 Batch

We are delighted to announce that the following student **have been placed in**

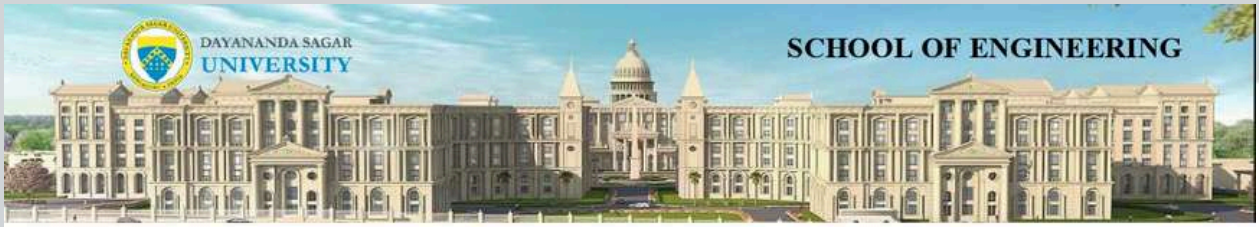
"TASTE OF MOM"

Sl No	USN	Name of the Candidate	CTC Offered	Branch
1	ENG22CS0310	Gudivada Pardha	4.5 LPA & 20,000 Stipend	CSE
2	ENG23EC1002	ROHAN RAJ	4.5 LPA & 20,000 Stipend	ECE

M N Guruvenkatesh
Sr. Vice President - Placements & Skill Development
Dayananda Sagar Institutions

Vijay Kumar S
Director - Training & Corporate Relations
Dayananda Sagar University

- Students of the Electronics and Communication Engineering (ECE) program at Dayananda Sagar University, Bengaluru from the 2026 graduating batch have secured placements with Ascent Circuits, where Usha D K (USN: ENG22EC0074) and Sneha V Biradar (USN: ENG22EC0064) received offers with a CTC of ₹6 LPA along with a ₹12,000 stipend, reflecting their strong technical competence and the university's focused training and placement efforts.



Training & Placement Cell

DSU /Placement /25-26/94 Date: 21-01-2026

Congratulations

Final Selected Students List – 2026 Batch

We are delighted to announce that the following student **have been placed in**

"Ascent Circuits"

Sl No	USN	Name of the Candidate	CTC offered	Branch
1	ENG22EC0074	Usha D K	6 LPA & 12,000 Stipend	ECE
2	ENG22EC0064	Sneha v Biradar	6 LPA & 12,000 Stipend	ECE
3	ENG22DS0010	R SINDHU	6 LPA & 12,000 Stipend	Data Science

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