DAYANANDA SAGAR UNIVERSITY

SCHOOL OF ENGINEERING

SOE - "The Weekly Buzz"

The Official Weekly Newsletter of School of Engineering

Week#22 (May 26 to 31st 2025)

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

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

- 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.

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

Faculty Contributions

Department Of Computer Science and Engineering

Dr. Girisha G S, Professor and Mr. Rakesh T M, research Scholar, Department of CSE published a research article entitled “Hybrid CNN-BiLSTM with CTC for Enhanced Text Recognition in Complex Background Images” in the Scopus indexed Q3 Journal named Journal of Information Systems Engineering and Management during May 2025.

Dr Rajesh T M, Associate Professor, Mrs. Lavanya B Koppal research Scholar, Department of CSE and Dr. Vedamurthy K B, Karnataka Veterinary Animal and Fisheries Science University, Bengaluru, published a research article entitled “View of Enhanced Deep Residual Network based Self-Learning framework for Mango leaf disease Classification_ Focus on Anthracnose and Grey Blight” in the Scopus indexed Q3 Journal named Journal of Information Systems Engineering and Management during May 2025.

Dr. Renuka Devi M N, Prof kavyashree I Pattan, Assistant Professors, and Dr Rajesh T M, Dr Praveen Kulkarni, Associate Professors, published a paper titled “A Novel Methods for Detecting Normal and Abnormal Crowd Dynamics using Optical Flow and Energy Level Analysis” as a book chapter in the book Advances in Electrical and Computer Technologies published by Taylor & Francis group which was presented in the Sixth International Conference on Advances in Electrical and Computer Technologies 2024 (ICAECT 2024) organized by the Sengunthar Engineering College (Autonomous), Tiruchengode, TamilNadu, India, and Diligentech Solutions, Coimbatore, Tamil Nadu, India, during 26–27 September 2024 with ISBN 9781003515470 and DOI https://doi.org/10.1201/9781003515470

Dr. Rajesh T M, Associate Professor, Mr. Kirti Vardhan(ENG22CS0342), Mr. Kevin V Shibu (ENG22CS0081), Ms. Priyanka Das(ENG22CS0397), 6th semester students, Department of CSE published a Indian patent with the title “Vehicle Hit and Run Crime Detection System and Method Thereof” with the application no 202541044742A and the name of the applicant Dayananda Sagar University during 30th May 2025.

Dr. Rajesh T M, Dr. Praveen Kulkarni, Associate Professors, and Dr. Renuka Devi M N, Assistant Professor, Department of CSE published an Indian patent with the title “SmartMentor: Deep Learning System for Classroom Behavior Intelligence and Pedagogical Enhancement” with the application no 202541044612A and the name of the inventor Dayananda Sagar University during 30th May 2025.

Prof. S. Benaka Santhosha, Assistant Professor, Department of CSE has published a paper titled “Robust Partial Image Security Through Chaotic Map and Non-adaptive Techniques” in the Springer Nature Q1 Journal SN computer Science during May 2025. https://doi.org/10.1007/s42979-025-03991-6

Dr. Senthil Kumar A, Professor and Dr. Gokulakrishnan S, Assistant Professor, Department of Computer Science and Engineering published an Indian patent with the title “Adaptive AI-IoT Architecture for Early Detection of Health Abnormalities” with the application no .202541050135 A and the name of the applicant Dayananda Sagar University during 30th May 2025.

Dr. Poongodi T, published a Scopus indexed conference paper entitled “Investigation of Security Attacks in IoMT Devices and Federated Learning as a Mitigation Strategy”, International Conference on Machine Learning and Data Engineering (ICMLDE 2024), Elsevier, ScienceDirect, Procedia Computer Science, 258 (2025) 3426–3435.


ScienceDirect

Procedia Computer Science

Investigation of Security Attacks in IoMT Devices and Federated Learning as a Mitigation Strategy

Dr. Poongodi T, Professor, Department of CSE contributed as an Academic Expert in the 7th Board of Studies (BoS) meeting, Department of Information Technology, KPR Institute of Engineering and Technology, Coimbatore, scheduled on 31st May 2025 (Saturday) from 11:45 AM to 12:30 PM, provided the valuable input for R2025 in designing the curriculum and syllabi.

Department Of Artificial Intelligence & Robotics

Dr. Gangadhar T G from the Department of Artificial Intelligence and Robotics Engineering, School of Engineering, Dayananda Sagar University, has published a research article titled “Photocatalytic performance of silver-doped titanium dioxide (TiO_2) nanoparticles for environmental applications” in Materials Technology Advanced Performance Materials, a Quartile 2 (Q2) journal. The study investigates the synthesis, characterization, and photocatalytic performance of silver-doped titanium dioxide (TiO_2) nanoparticles, focusing on their potential for environmental remediation, particularly in pollutant degradation under sunlight.

Dr. Bharath Kumar S, from the Department of Artificial Intelligence and Robotics Engineering, School of Engineering, Dayananda Sagar University, has published a research article in Scientific Reports (Nature), a Quartile 1 (Q1) journal, titled:"Separator Equipment Performance of Iron Ore and Coal Using Experimental and ANN-Based Analysis." This work presents the development of an Artificial Neural Network (ANN) and regression model designed to predict and optimize the performance of separator equipment used in processing iron ore and coal. The model was trained on experimental data to accurately evaluate separation efficiency and enable data-driven improvements in operational processes. The research was conducted in collaboration with RV University, Marwadi University, and King Saud University.

Department Of CSE (Data Science)

Dr. Suresh Arumugam has been appointed as the Global Professor of Practice in Emerging Technology at Golden Gate University—an eminent and prestigious position.

GOLDEN GATE UNIVERSITY

Date: May 21st 2025

RE: Appointment Letter

Name: Dr. Suresh Arumugam

Email: s.suresh.a@gmail.com

Dear Dr. Suresh Arumugam,

On behalf of Golden Gate University (GGU), and on recommendation from, GGU Worldwide Curriculum Committee, Associate Dean, I am pleased to extend an invitation for you to serve as a Adjunct for GGU Worldwide with duties, and responsibilities as assigned by the Dean. This letter outlines your status, rights, and responsibilities. The terms of the offer are as follows:

Location: Remote

Appointment: GGU Worldwide

Resources: Full access to the University Library, GGU issued email address, and access to MyGGU Faculty and staff portal

Effective Dates: May 2025

There are no benefits associated with this appointment. The position neither accrues tenure, made nor implies a promise of future employment. Appointments are determined prior to the beginning of each term. The appointment is only for the period and purposes specified, with no other interest or right obtained by virtue of such appointment. Future appointments are not guaranteed.

Please acknowledge your acceptance of this appointment as Global Professor of the Practice should you have any questions about this appointment letter, please do not hesitate to contact me. We look forward to you joining the Golden Gate University Worldwide team and to the contributions that you will make to the university.

Dr. Shaila S G has contributed as Reviewer of “International Conference on Recent Innovations in Engineering Science & Technology-(ICRIET-2025) held at K. S. Institute of Technology, Bengaluru on 9th - 10th May 2025

KAMMAVARI SANGHAM- 1952

K. S. INSTITUTE OF TECHNOLOGY

Affiliated to VTU & Approved by AICTE, New Delhi Accredited by NBA (CSE, ECE), NAAC with A+ Grade, QS-I Gauge-Gold Rating

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru - 560109

CERTIFICATE OF APPRECIATION

This certificate is awarded to

Dr.Shaila S G

Dayananda Sagar University, Bengaluru

On behalf of the organizing committee of "International Conference on Recent Innovations in Engineering Science & Technology-(ICRIET-2025)", We would like to express our sincere gratitude for the invaluable scientific efforts of being a reviewer for ICRIET-2025 held at K. S. Institute of Technology, Bengaluru on 9th - 10th May 2025.

Dr. D R Swamy
Conference Convener
Executive Director-KSIT

Dr. Dilip Kumar K
Conference Chair
Principal & Director

Department Of CSE (Cyber Security)

Dr. Dilip Kumar Jang Bahadur Saini, Associate Professor, and Dr. D. Sumathi, Professor, from the Department of Computer Science and Engineering (Cyber Security), School of Engineering, Dayananda Sagar University, were awarded Certificates of Appreciation for their outstanding contribution as Track Chairs at the International Conference on Artificial Intelligence and Sustainable Innovation 2025 (ICAISI-2025). They jointly chaired Special Track 18: Recent Trends and Challenges in Artificial Intelligence, Biomedical Science, and Healthcare Informatics for Society 5.0 Using New Age Technologies. The conference, organized by Suresh Gyan Vihar University, Jaipur, was held on May 30–31, 2025, and brought together researchers and professionals from around the world. Their leadership and expertise significantly contributed to the success and academic excellence of the conference.

CRC Press

SURESH GYAN VIHAR UNIVERSITY

International Conference on Artificial Intelligence and Sustainable Innovation-2025 (ICAISI-2025)

May 30-31, 2025

Certificate of Appreciation

This certificate is awarded to Dr. Dilip Kumar Jang Bahadur Saini, Associate Professor of Dayananda Sagar University, Harohalli, Bengaluru for his/her outstanding contribution as "Track Chair" for the Special Track 18: Recent Trends and challenges in Artificial Intelligence , Biomedical Science and Healthcare Informatics for Society 5.0 using New Age Technologies in the ICAISI-2025 organized by Suresh Gyan Vihar University, Jaipur held from May 30th to 31st, 2025.

We thank you for your valuable service in upholding the quality and integrity of conference!

Prof (Dr.) Sokit Agarwal
Conference Chair

Prof (Dr.) Sandhya Sharma
Conference Chair

Dr. Arunmozi Muhhar
President

CRC Press

SURESH GYAN VIHAR UNIVERSITY

International Conference on Artificial Intelligence and Sustainable Innovation-2025 (ICAISI-2025)

May 30-31, 2025

Certificate of Appreciation

This certificate is awarded to Dr. D.Sumathi, Professor of Dayananda Sagar University, Harohalli, Bengaluru for his/her outstanding contribution as "Track Chair" for the Special Track 18: Recent Trends and challenges in Artificial Intelligence , Biomedical Science and Healthcare Informatics for Society 5.0 using New Age Technologies in the ICAISI-2025 organized by Suresh Gyan Vihar University, Jaipur held from May 30th to 31st, 2025.

We thank you for your valuable service in upholding the quality and integrity of conference!

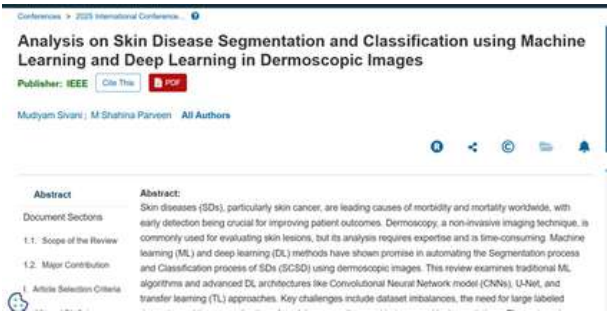
Prof (Dr.) Sokit Agarwal
Conference Chair

Prof (Dr.) Sandhya Sharma
Conference Chair

Dr. Arunmozi Muhhar
President

Department Of Computer Science and Technology

Dr. M. Shahina Parveen, Professor and Chairperson, and Ms. Mudiyam Sivani, Research Scholar, published a research article titled 'Analysis on Skin Disease Segmentation and Classification using Machine Learning and Deep Learning in Dermoscopic Images' in the 2025 International Conference on Data Science, Agents & Artificial Intelligence (ICDSAAI), IEEE Xplore.



Conferences > 2025 International Conference...

Analysis on Skin Disease Segmentation and Classification using Machine Learning and Deep Learning in Dermoscopic Images

Publisher: IEEE | Cite This | PDF

Mudiyam Sivani ; M Shahina Parveen All Authors

Abstract

Document Sections

1.1. Scope of the Review

1.2. Major Contribution

I. Article Selection Criteria

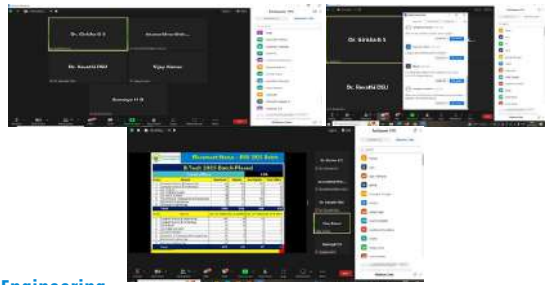
Abstract:

Skin diseases (SDs), particularly skin cancer, are leading causes of morbidity and mortality worldwide, with early detection being crucial for improving patient outcomes. Dermoscopy, a non-invasive imaging technique, is commonly used for evaluating skin lesions, but its analysis requires expertise and is time-consuming. Machine learning (ML) and deep learning (DL) methods have shown promise in automating the Segmentation process and Classification process of SDs (SCSD) using dermoscopic images. This review examines traditional ML algorithms and advanced DL architectures like Convolutional Neural Network model (CNNs), U-Net, and transfer learning (TL) approaches. Key challenges include dataset imbalances, the need for large labeled

Departmental Activities

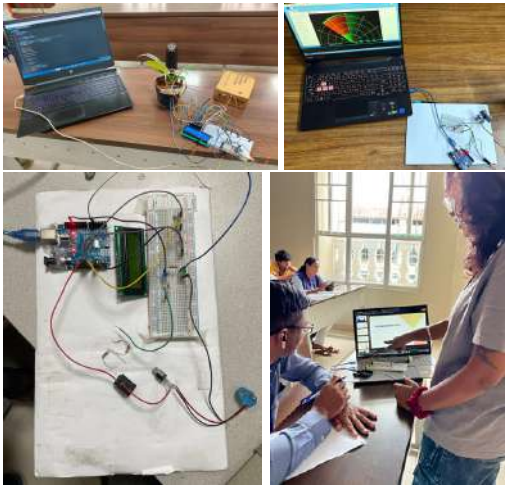
Department Of Computer Science and Engineering

Parents – Teachers Meeting was conducted by the Department. of Computer Science and Engineering for the parents of 4th and 6th semester students on May 30th, 2025 through online mode. The meeting began with a welcome address by the Chairman, followed by a highlighting the department's curriculum, department achievements, including academic results, workshops, and industry collaborations. The placement coordinator along with HR discussed placement activities happening in college campus along with current placement status. Class advisors send separate google-meet to their respective classes and discuss students' academic performance, attendance, and the importance of skill development. The detailed insights into the academic performances of students, highlighting both strengths and areas needing improvement. Parents were provided with individualized reports and feedback on their wards academic standing and were encouraged to actively participate in their wards educational journey. Parents were informed about the various clubs, sports teams, and cultural activities available at the college, emphasizing the role of these activities in shaping an all-rounded individual. Dr. Girisha G S, Professor and Chairman, shared observations regarding students' behaviour, social interactions, and overall attitude in and outside the classroom. He gave a short introduction of department activities, College website, important web pages, Curriculum and the important links in the website.



The Department of Computer Science and Engineering, School of Engineering, organized a Mini Project Expo on May 26, 2025, as part of the Skill Enhancement Course on IoT Automation. The event showcased the innovative IoT-based projects developed by 4th semester students, applying classroom concepts to real-world automation challenges. Projects featured applications in smart homes, health monitoring, irrigation systems, and industrial automation, integrating sensors, microcontrollers, and cloud technologies. Two faculty reviewers, Prof. Mala B A (CSE) and Prof. Pradeep Kumar K (AI & ML), evaluated the projects on innovation, functionality, and technical execution, providing valuable feedback.

The Department Chairperson commended the students' creativity and emphasized the importance of interdisciplinary learning and practical exposure in engineering. Faculty coordinators Prof. Vishwas D B and Prof. Dharmendra D P coordinated the event, which concluded successfully, leaving students inspired to further explore IoT and its transformative potential.



Department Of CSE (AIML)

“Stress Management: Unplug the Pressure” is a student wellness initiative organized by the Department of CSE (AI & ML) at Dayananda Sagar University, designed to support students’ mental health and emotional resilience. Conducted across multiple sessions, the program features expert guidance from psychiatrists of CDSIMER and DSU faculty, focusing on stress awareness, cognitive well-being, and behavioral discipline. The series began with a self-realization session by Prof. S.V.K.R. Rajeswari, followed by engaging talks on relationships, cognitive distortions, time management, and behavioral addictions. Guest speakers included Dr. Anupama, Dr. Pooja, Dr. Neeraj, Dr. Gopal, and Dr. Likhith from the Department of Psychiatry, CDSIMER. The initiative empowers students with tools to manage academic stress and lifestyle challenges effectively, reinforcing DSU’s commitment to holistic education and mental wellness.

Department Of CSE (Data Science)

The Department of Data Science organized the Bright Minds Expo 2025 on 27th May for 6th semester students, offering a platform to showcase innovative projects. The event featured a wide array of applications in Machine Learning, NLP, Deep Learning, and Data Visualization, emphasizing real-world problem solving. Dr. Basavaraj N. Hiremath, Professor, CSE, served as the Chief External Panel Member and provided insightful feedback. The expo fostered peer learning, faculty-student collaboration, and encouraged future research. Promising projects were identified for further development and potential publication.

"MoU Signing Between DSU and IBM"

On May 30, 2025, Dayananda Sagar University (DSU) formalized a strategic academic partnership with IBM India Pvt. Ltd. through the signing of a Memorandum of Understanding (MoU) at the University's Board Room in Bengaluru. The event was attended by the Hon'ble Vice Chancellor, Pro Vice Chancellor, Dean of Engineering, Registrar, Chairperson of AI & ML, and IBM representatives. This landmark collaboration aims to enhance DSU's engineering curriculum with industry-relevant, future-ready learning pathways, underscoring the university's vision for academic excellence and global competitiveness.

This MoU not only strengthens DSU's industry engagement but also positions it as a premier destination for developing next-generation talent, fully aligned with international technology and innovation standards.

"Board of Studies (BoS)"

Department Of Aerospace Engineering

The Department of Aerospace Engineering at Dayananda Sagar University conducted its Board of Studies (BoS) meeting on May 31, 2025, to review and enhance the curriculum in line with industry advancements and academic rigor. Key updates for the 2024–2028 batch included the integration of civil (DO160G) and military (MIL810G) standards, Model-Based Systems Engineering (MBSE), GD&T, and enhanced applied mathematics. New courses such as Aircraft Systems (in collaboration with Bosch Lab), Unmanned Aerial Systems (UAS), and Sustainable Aviation were introduced, alongside AI/ML, digitization, and MOOC-based learning components. Discussions also explored MoUs with Capgemini and Dassault Systèmes for software training. Minor adjustments were made for earlier batches, including elective revisions and proposals for certification modules and policy workshops. The meeting, attended by academic and industry experts, concluded with a vote of thanks, reinforcing the department's commitment to a future-ready, interdisciplinary, and industry-aligned aerospace curriculum.

Department Of Artificial Intelligence & Robotics

The Department of Artificial Intelligence & Robotics, School of Engineering, Dayananda Sagar University, conducted its Board of Studies (BoS) meeting on May 30, 2025, in hybrid mode at Lecture Hall 3, Block A. The meeting focused on reviewing the revised curriculum and CBCS syllabus for the B.Tech in AI and Robotics program (2023–2025 batches). Dr. Pramod Kumar Naik, Chairperson, along with faculty members Dr. Rupam Bhaduri, Dr. Gangadhar T. G, Dr. Jayavrinda Vrindavanam, and Dr. Bharath Kumar S, led the proceedings. Valuable contributions were made by external members: Mr. Rohan Dalmia (Bosch Global Software Technologies), Mr. Nijil George (TCS), Dr. A. Roy Chowdhury (IISc), and Dr. V. Pandu Ranga (IIT Bhubaneswar). Constructive feedback helped align the curriculum with industry demands and academic excellence. The department chairperson and faculty were appreciated for their commitment to delivering a forward-looking, industry-relevant program in Artificial Intelligence and Robotics.

Department Of Computer Science & Engineering

The Department of Computer Science & Engineering at Dayananda Sagar University conducted its Board of Studies (BoS) meeting on 31st June 2025 in a hybrid format. The session brought together a distinguished panel comprising Dr. Girisha G S, Dr. Rishikesh K Joshi, Ms. Soumya Prasada, Mr. Mekala V Reddy, Mr. Dhruva Santosh, Dr. Basavaraj Hiremath, and Dr. Chetan V Sagarnal. The meeting focused on reviewing and approving the curriculum for the 2024–2028 and 2025–2026 batches. Emphasis was placed on aligning the syllabus with NEP 2020, integrating emerging technologies, promoting outcome-based education and strengthening industry-academia collaboration to enhance student employability and interdisciplinary learning.

Department Of CSE (AIML)

The Department of CSE (AI&ML) at Dayananda Sagar University conducted its Board of Studies (BOS) meeting for the 2024–2028 batch, focusing on aligning the curriculum with global standards and NEP 2020. Chaired by Dr. Jayavrinda Vrindavanam, the meeting emphasized the integration of cutting-edge topics like Generative AI and Cybersecurity. Key highlights included approval of innovative courses such as AI for Renewable Energy and DevOps, skill enhancement strategies in cloud computing, Java, and industry-led training sessions. Valuable inputs from eminent experts like Dr. Mayank Baranwal (TCS Research), Dr. Saswati Dana (IBM Research), and Dr. Ajin George Joseph (IIT Tirupati) strengthened the curriculum's focus on interdisciplinary learning and employability. The meeting concluded with a vote of thanks by Dr. Vinutha N.

Department Of CSE (Cyber Security)

The Department of Computer Science and Engineering (Cyber Security), School of Engineering, Dayananda Sagar University, conducted an Industry Conclave on 14th and 23rd May 2025, featuring expert speakers from reputed organizations including NetSPI, Crypto Forensic Technology, SISA InfoSec Pvt. Ltd., and Samsung R&D. The discussions focused on aligning academic content with evolving industry demands by recommending the inclusion of privacy-enhancing technologies, blockchain, cloud security, and AI-powered cybersecurity frameworks.

Reinforcing this initiative, the Board of Studies (BoS) meeting held on 16th May 2025, chaired by Dr. Durbadal Chattaraj and convened by Dr. Devi Priya V S, approved curriculum revisions across three academic schemes (2022–2026, 2023–2027, 2024–2028). Key recommendations included restructuring courses, introducing a new course on Incident Response and Threat Intelligence, upgrading IoT security modules, and enhancing capstone projects and lab facilities, thereby strengthening academic rigor and industry relevance.

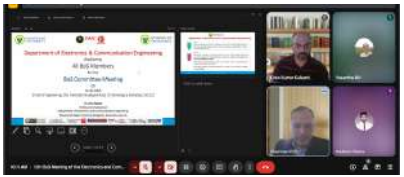
Department Of CSE (Data Science)

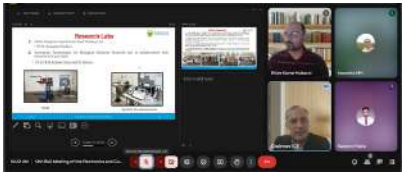
The Department of Computer Science & Engineering (Data Science), School of Engineering, conducted its Board of Studies (BoS) meeting on 30th May 2025 in hybrid mode. The agenda included discussions on stakeholder feedback and curriculum deliberations for the 2023, 2024, and 2025 batches across all semesters under the CBCS framework.

The session was chaired by Dr. Shaila SG and attended by esteemed offline participants including Dr. Udaya Kumar Reddy K R, Dr. K S Sreedhar, Mr. Rajashekhar Hiremath, Dr. M K Banga, Dr. Basavaraj N Hiremath, and Prof. Monish L. Online attendees included Dr. Mahesh Kumar H. Kolekar from IIT Kharagpur and Dr. Surendiran K from NIT Puducherry. Constructive feedback and suggestions were provided, resulting in the refinement of the curriculum to enhance academic rigor and industry relevance.

Department Of Electronics and Communication Engineering

The Department of Electronics and Communication Engineering, SOE-DSU conducted its Board of Studies (BoS) meeting to deliberate on curriculum development for B.Tech, M.Tech, and Ph.D. programs. Dr. Arun Balodi, Chairman–ECE, along with other internal BoS members, was present for the session. Key outcomes included the approval of the B.Tech ECE 2025–2029 syllabus, ratification of the M.Tech Embedded Systems curriculum, and discussions on Ph.D. coursework. Dr. Balodi also presented the department's achievements in research funding and infrastructure development. Expert members emphasized the inclusion of practical skills and a tools-based approach to AI/ML courses. The meeting concluded with a vote of thanks, recognizing the valuable contributions of all members.





SCHOOL OF ENGINEERING

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