Volume 04
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DAYANANDA SAGAR UNIVERSITY

SCHOOL OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)

DATA GLIMPSE

JULY 2025 - DECEMBER 2025

BI - ANNUAL NEWSLETTER

Dayananda Sagar University, School of Engineering
Devarakaggalahalli, Harohalli Kanakapura Road, Bengaluru South District
Karnataka - 562112

VISION AND MISSION DSU

Vision:

To be a centre of excellence in education, research & training, innovation & entrepreneurship and to produce citizens with exceptional leadership qualities to serve national and global needs.

Mission:

To achieve our objectives in an environment that enhances creativity, innovation and scholarly pursuits while adhering to our vision

VISION AND MISSION CSE (Data Science)

Vision:

To produce Engineers for Industry and Society in the field of Computer Science and Engineering (Data Science) by providing Excellence in Education, Research and Entrepreneurship with focus on sustainable solutions to fulfill global needs.

Mission:

The Department of Computer Science and Engineering (Data Science) in committed to:

- Impart quality education, critical thinking and sustainable learning practices in the domain of Computer Science and Engineering (Data Science) with ethical values and leadership qualities.
- Inculcate Interdisciplinary Research and Innovation by establishing Industry-Academia collaboration to solve critical problems.
- Prepare graduates to become Ethical Data Science practitioners to contribute in data driven global society.

DEAN'S MESSAGE

Dr. Udaya Kumar Reddy K R
Dean - School of Engineering
Professor, Dept. of Computer Science and Engineering
DSU

I am delighted that the Department of Computer Science and Engineering (Data Science) is bringing out the newsletter that can provide wonderful insights for students and faculty fraternity.

A lot has been happening in the school of computing sciences over the years, and one of the significant changes involves this newsletter.

Our graduate students are doing amazing things in many different areas in different ways. In the current issue, you'll meet some remarkable students and faculty who are making a difference in the technical aspects and otherwise. We are hoping to build this endowment with your support, to afford even more opportunities for students to take part in this important component of their graduate education.

I hope this magazine provides the reader a wonderful insights and I thank the editorial team for their wonderful effort in bringing out this newsletter.
Wish you all the best.

CHAIRPERSON'S MESSAGE

Dr. Shaila S G
Professor & Chairperson
Department of CSE
(Data Science) SOE,DSU

It gives me immense pleasure and pride to introduce the Volume 4 Issue 2 of the Newsletter DATA GLIMPSE from the Department of Computer Science & Engineering (Data Science). The Data Science is designed to bridge the industry gaps in terms of research and development using cutting-edge technologies. The program aims to meet the requirements of various job roles in Data Science.

The students and faculty members of the program have contributed technologically to solving real-world challenges through projects, hackathons, and quizzes. The program has offered various workshops and webinars for the students to develop their skills and knowledge in various domains. These events are effectively captured in the newsletter in the form of articles and achievements. I hope the Data Science newsletter motivates and encourages the students and faculty members with ample opportunities and exposure.

I thank the students, faculty members, and the editorial team for their wonderful efforts in bringing out this newsletter.

ABOUT THE PROGRAM

B.Tech CSE (Data Science) is a 4-year undergraduate degree programme. Data Science teaches the students how to combine Machine Learning techniques, algorithms, tools, business acumen and mathematics and apply on raw data to extract insight information from it. In short, technology algorithm development and data inference are blended together to solve complex problems analytically in Data Science.

Throughout the entire duration of the programme, the students are taught how to amalgamate business knowledge, tools and statistics to generate business value in creative ways.

The four-year undergraduate curriculum includes a detailed delivery of Basic Sciences, Mathematical Foundations, Statistical Foundations, Artificial Intelligence, Machine Learning, Data Science, Deep Learning, and Data Visualization.

The curriculum imparts 21st century skills having the following components: Liberal education aspects for all round development, courses that trigger new age skills, project based learning, special topics (hands-on sessions on multiple topics with mentoring from expert), option for MOOC, UG Research Project/Product Development/Internships.

The curriculum focuses on Liberal Art Courses, Foundation Courses, Professional Courses, and Electives that helps them build expertise in some specialized areas. Curriculum developed also emphasis on Design oriented thinking, Communication, Collaboration and Creativity right from 1st year.

A degree in Computer Science (Data Science) can lead to the following job roles in a variety of industries such as Retail, Finance, E-commerce, Healthcare, IT services:

- Data Scientist
- Data Analyst
- Business Analyst
- Data Engineer
- Senior Data Engineer
- Senior Data Analyst
- Data Director

AGENDA

AGENDA

FACULTY LIST

Dr. Shaila S G
Professor & Chairperson

Dr. Shaila S G has earned her Ph.D in Computer Science from NIT, Trichy, Tamil Nadu for her thesis on Multimedia Information Retrieval in Distributed System. She has 25+ years of experience in teaching & research in the concerned field. She has worked for CPRI, Bangalore as a Trainee Engineer. Later, she worked as a Research Fellow for a DST project, India for a period of 3 years. She has also worked in Indo-US collaborated project for "Obama-Singh Knowledge Initiative Program" in the University of Nevada (UNLV), Las Vegas, United States. She is a certified IBM trainer for the Business Intelligence. Her research areas are Data mining, Information Retrieval, Image Processing and Computational Neuroscience. She has published more than 50 research articles in reputed Journals and Conferences, books and book chapters. She has 11 Indian Patents and 2 Australian Patents.

Dr. Santhosh Kumar G
Associate Professor

Dr. Santhosh Kumar G is an Associate Professor in the Department of Computer Science and Engineering (Data Science) with 14 years of teaching experience and 3 years in industry as a developer at Access Info Technologies. He earned his Ph.D. in Computer and Information Science from VTU, Belagavi, with a thesis on "A Secured and Energy Efficient Framework through Resource Optimization in Cloud Computing," focusing on optimizing virtual machines for security and energy efficiency. He holds a patent on "Maximum Demand Controller for Domestic Load Management" and has published five papers in international conferences. His research interests include cloud computing and data analytics

Dr. Suresh Arumugam
Associate Professor

Dr. Suresh Arumugam, with 13 years of experience across academia, research, and industry, specializes in Machine Learning, Big Data, and MLOps. He holds a Ph.D. in optimizing ML services, over 10 Scopus publications, and five professional certifications, including Microsoft Azure Data Engineer Associate. He has worked with clients like Adidas, Deloitte, and Flipkart, focusing on data pipelines and ML systems. An adjunct faculty at institutions like NMIMS and Rennes School of Business, he has earned awards like the Best Teaching Award and holds a patent for an improved ankle-foot orthosis.

Dr. U Pavan Kumar
Assistant Professor

Dr. U. Pavan Kumar is currently working as an Assistant Professor in the Department of Computer Science and Engineering (Data Science). Dr. U. Pavan Kumar completed his PhD from REVA University, Bengaluru, INDIA.2020, M. Tech., from M.V. J College of Engineering, Bengaluru and his research area includes Image and Video Processing, Data Science with Machine Learning. He has more than 10 years of Teaching, Research and Industry experience in various Institutions in India. He has published more than 21 papers in Peer-reviewed journals, international conferences, books, patents, design patents and copyrights. Dr. U. Pavan Kumar received certification of Appreciation in Computer Science and Engineering as a NPTEL Discipline Star and Top Performing Mentor. He has actively participated in more than 52 FDPs, Workshops and Webinars.

FACULTY LIST

Dr. Jobin Thomas
Assistant Professor

Dr. Jobin Thomas is an accomplished academician with over 12 years of experience in teaching and research in Computer Science and Engineering. He holds a Ph.D. focused on time series analysis using the Distributed Lag Non-Linear Model (DLNM) to study environmental impacts on schizophrenia admissions. His research interests include data analytics, time series modelling, and machine learning, with publications in Scopus-indexed venues. He is skilled in Python, R, Java, JavaScript, C++, Tableau, MongoDB, and Figma, and has guided numerous B.Tech and M.Tech projects. A passionate educator, he integrates activity-based learning, hackathons, and mini-projects into his teaching and contributes to curriculum development and academic growth.

Prof. Shivamma D
Assistant Professor

Shivamma D is working as an Assistant Professor in the Department of Computer Science and Engineering (Data Science). She is pursuing Ph.D in Dayananda Sagar University, Bengaluru. She completed her M.Tech from Birla Institute of Technology and Science (BITS), Pilani (Rajasthan). She has an extensive experience of 12+ years in the field of Teaching and Research. She has worked as an IT Officer/IT Programmer/Data Analyst at National Institute of Mental Health And Neuro Science (NIMHANS), An Institute of National Importance, Government of India located at Bangalore. Her research interests are in the area of Technology Enabled Digital Learning, Machine Learning, Image Processing, Computational Neuroscience, Big Data Analytics and Data Science.

Prof. Monish L
Assistant Professor

Monish L is working as an Assistant Professor in the Department of Computer Science & Engineering (Data Science). He is pursuing Ph D on Image Analytics in Dayananda Sagar University. He has completed M. Tech from Dayananda Sagar University, and B.E. from The Oxford College of Engineering. He has 1 year of industrial experience in ADAS. He is a certified trainer of JAVA and FSD from Virtusa. He has published 3 Book chapters in an international journal. His paper is awarded with the best paper award in the ICAMIDA 2022 conference. His areas of interest are Data Mining, Knowledge Discovery, Data Analytics, Machine Learning and Artificial Intelligence.

Prof. Manjula M
Assistant Professor

Manjula M is working as an Assistant Professor in the Department of Computer Science & Engineering (Data Science). She is pursuing Ph.D on Image Retrieval in Dayananda Sagar University. She has completed M.Tech in Computer Network & Engineering from East west Institute of Technology Bangalore, affiliated to VTU She has 4 years of Teaching Experience in Dayananda Sagar Institute of Technology and 1 year IT experience as a Web Developer, I Published 4 paper in International Journals and 1 paper in National Conferences. Her areas of interest are Cyber Security and Forensics, Image Processing, Machine Learning and Artificial Intelligence.

FACULTY LIST

Prof. Sindhu A
Assistant Professor

Sindhu A is working as an Assistant Professor in the Department of Computer Science & Engineering (Data Science). She has completed M.Tech from Dayananda Sagar University, and B.E. from BMS College of Engineering,Bangalore.Worked as an intern in Tech Citi Technologies. She has published 3 research papers. Areas of interest are Computer Vision, Machine Learning,Data Mining,Artificial Intelligence and Image Processing.

Prof. Godhandaraman T
Assistant Professor

Mr. Godhandaraman T, an Assistant Professor in the Department of Computer Science and Engineering (Data Science), holds a Master's in CSE from Anna University, Coimbatore, and a Bachelor's from Anna University, Chennai. With 13 years of teaching experience across institutes like DrMCET and MVJCE, he specializes in Cloud Computing and Data Analytics. He has conducted workshops on IoT, Machine Learning, and more, published seven papers, and completed an IBM Mainframe Certification. Proficient in programming and networking, he is a lifetime ISTE member and has participated in numerous FDPs on AI, cybersecurity, and software trends.

Prof. Chandrakala L
Assistant Professor

Chandrakala L is working as an Assistant Professor in the Department of Computer Science & Engineering (Data Science). She has completed M.Tech from the National Institute of Engineering, Mysuru, and a B.E. from CMRIT College, Bangalore. She has 8 years of teaching experience. She worked as an Assistant Professor in the department of CSE at Mysuru Royal Institute of Technology, Mandya. and also worked as a part-time lecturer in the department of CSE at Government Engineering College, Chamarajanagara.

Prof. Prapti Bhattacharjee
Assistant Professor

Prapti Bhattacharjee is an Assistant Professor in the Department of CSE (Data Science). She completed her M.Tech with a specialization in Data Science from CMR University and her B.Tech in Computer Science and Engineering under MAKAUT (formerly known as WBUT). Prapti's research interests focus on practical applications of machine learning,data science and mainlz LLMs. Her recent projects include a multilingual language model for text generation and a real-time sign language detection system, both aimed at solving real-world challenges. She has also contributed to publications in few journals and have publised a bookchapter with IGI Global on Cryptocurrency.

FACULTY LIST

Prof. Kishor Malakar
Assistant Professor

Mr. Kishor Malakar is an Assistant Professor in the Department of CSE (Data Science) at Dayananda Sagar University. He holds M.Tech and B.Tech degrees from NIT Mizoram. His expertise lies in AI-driven human behavior modeling, trajectory forecasting, and social robotics. He has published research in reputed platforms, including CRC Press and RCSC 2025. Kishor is skilled in Python, Java, ReactJS, and data tools, and is passionate about innovation, teaching, and mentoring in tech and research.

Prof. Megha Chandel
Assistant Professor

Mr. Megha Chandel is an Assistant Professor in the Department of CSE (Data Science) at Dayananda Sagar University. He holds B.Tech and M.Tech degrees from NIT Mizoram, with a strong focus on Computer Vision, Machine Learning, and Data Science. His notable research includes a dual-camera person counting system using YOLOv9 and re-identification in public transport. Passionate about applied research and innovation, he actively works on real-time solutions and seeks collaborative opportunities for societal impact.

Prof. Mithun Kumar
Assistant Professor

Mr. Mithun Kumar is an Assistant Professor in the Department of CSE (Data Science) at Dayananda Sagar University. He holds an M.Tech in Computer Science and Engineering (Data Science) from VIT. His interests include Data Science, Machine Learning, AI, and Generative AI, with a focus on ethical and impactful solutions. With research-driven internships in responsible AI and data privacy, he is passionate about continuous learning and mentoring students to become future-ready professionals. He aims to bridge the gap between academia and industry through innovation and purpose-driven education.

Prof. Souramita Bhowmik
Assistant Professor

Ms. Souramita Bhowmik is working as an Assistant Professor in the Department of CSE (Data Science). She holds an M.Tech in Data Science and Engineering from NIT Agartala and a B.Tech in Computer Science and Engineering from Tripura University, where she received the Gold Medal for academic excellence. Her key interests include Natural Language Processing (NLP), Artificial Intelligence (AI), Machine Learning, and Data Science. She has published a conference paper in the field of biomedical NLP and remains committed to ongoing research and upskilling. Driven by a passion for innovation and teaching, she strives to inspire future innovators and use her expertise to bring meaningful change to her students and to society.

FACULTY LIST

Prof. Shashank Shekhar
Assistant Professor

Mr. Shashank Shekhar is an Assistant Professor in the Department of CSE (Data Science) at Dayananda Sagar University, Bengaluru. He holds an M.Tech in Data Science and a B.Tech in ECE from NIT Mizoram. His research focuses on cybersecurity, machine learning, and explainable AI, with recent work on cyberattack detection in 5G O-RAN networks. Certified in cybersecurity from C-DAC Noida, he brings hands-on expertise in ethical hacking and network security tools. He actively mentors students and promotes interdisciplinary research and innovation.

Prof. Mriganka Das
Assistant Professor

Mr. Mriganka Das is working as an Assistant Professor in the Department of CSE (Data Science). He holds an M.Tech in Data Science and Engineering from NIT Agartala, with expertise in Data Science, Artificial Intelligence, Machine Learning, and Natural Language Processing. His research interests include information retrieval, question answering, and generative AI, focusing on building intelligent, human-centric systems. Passionate about innovation and teaching, he promotes hands-on learning and collaborative exploration to empower future technologists.

Prof. Snigdha Sikha Kashyap
Assistant Professor

Snigdha Sikha Kashyap is an Assistant Professor in the Department of Data Science at Dayananda Sagar University (DSU), Bengaluru. She holds an M.Tech in Data Science and Engineering from NIT Silchar and a B.E. in Computer Engineering from Jorhat Engineering College, Assam. Her research interests include deep learning, machine learning, computer vision, and infrastructure automation. She has designed advanced deep learning models for perceptual hashing, achieving high AUC performance on standard datasets, with her work accepted for oral presentation at IEEE INDISCON 2025. She has also contributed to agricultural AI through rice leaf disease classification. Prior to DSU, she worked at Nokia Solutions Network, Bengaluru, developing large-scale automation solutions. At DSU, she actively mentors students and promotes research-driven, interdisciplinary problem solving.

SUPPORTING STAFF

Divya R
Teaching Assistant
/Lab Instructor

Kiran Kumar H L
Lab Instructor

Shivabashayya Puranik Math
Office Assistant

ARTICLES

Agentic AI: The Next Leap in Autonomous Intelligence

Agentic AI represents a major advancement in the field of artificial intelligence, shifting systems from being reactive tools to autonomous agents capable of independent action. Unlike traditional AI models that operate only when prompted, Agentic AI systems can set goals, plan strategies, and execute tasks on their own. This evolution enables AI to participate actively in problem-solving, decision-making, and long-term task management.

The core strength of Agentic AI lies in its ability to integrate perception, reasoning, learning, and memory into a unified framework. These systems can observe their environment, interpret complex information, and determine the most effective course of action. By continuously learning from outcomes and feedback, Agentic AI becomes more adaptive and efficient, allowing it to handle dynamic and uncertain real-world scenarios.

In the academic domain, Agentic AI has the potential to transform teaching, learning, and research. Intelligent agents can support personalized learning pathways, assist educators in assessment and feedback, and aid researchers in data analysis and literature exploration. Such applications enhance both productivity and the quality of academic outcomes while encouraging innovation in higher education.

Beyond academia, Agentic AI is being widely adopted in healthcare, industry, and business. In healthcare, autonomous agents assist in patient monitoring and clinical decision support. In industry, they optimize supply chains, manage resources, and automate complex workflows. These applications demonstrate how Agentic AI improves efficiency, accuracy, and responsiveness across sectors.

Despite its promising capabilities, the rise of Agentic AI also brings ethical and governance challenges. Issues related to accountability, transparency, and human oversight must be carefully addressed to ensure responsible use. As Agentic AI continues to evolve, aligning autonomous systems with human values and ethical principles will be crucial, enabling them to serve as reliable partners in shaping a smarter and more inclusive future.

Dr. Shaila SG
Chairperson & Professor
Dept. of CSE (DS)

BEYOND GPUS: QUANTUM COMPUTING FOR AI

For over a decade, GPUs have powered the rapid advancement of artificial intelligence, enabling large-scale machine learning and deep learning through massive parallel processing. However, as AI models continue to grow, complexity, and energy demand, GPU-centric computing is approaching practical limits. Training state-of-the-art models now requires substantial computational resources, extended training cycles, and significant power consumption—prompting the search for computing paradigms that go beyond GPUs.

Quantum computing introduces a fundamentally new approach by harnessing quantum principles such as superposition and entanglement. Unlike classical GPU-based computation, quantum systems can evaluate multiple states simultaneously, allowing efficient exploration of vast and complex solution spaces. This makes quantum computing particularly promising for AI challenges involving large-scale optimization, high-dimensional search, and probabilistic inference.

Rather than serving as a replacement, quantum computing is expected to complement existing AI infrastructure through hybrid quantum–classical architectures. In these systems, GPUs continue to manage data-intensive training and inference, while quantum processors accelerate specific tasks such as optimization, sampling, and complex feature-space exploration. Use cases including hyperparameter optimization, probabilistic modeling, and combinatorial problem-solving stand to benefit most from this collaboration.

Although quantum computing for AI is still in an early phase, ongoing advances in quantum hardware, cloud-based quantum platforms, and software ecosystems are rapidly improving accessibility. Challenges related to qubit stability, error correction, scalability, and algorithm maturity remain, but progress in these areas is accelerating.

As AI pushes beyond the limits of classical hardware, quantum computing presents a compelling pathway forward. By moving beyond GPUs and embracing quantum-assisted AI, the next generation of intelligent systems can achieve greater efficiency, deeper insights, and transformative innovation—marking a decisive leap in the evolution of artificial intelligence.

Dr. Suresh Arumugam
Associate Professor
Dept. of CSE (DS)

GENERATIVE ARTIFICIAL INTELLIGENCE: TRANSFORMING THE DIGITAL FUTURE

Generative Artificial Intelligence (GenAI) represents one of the most transformative technological shifts of the modern era. Unlike traditional AI systems that focus on classification or prediction, GenAI models are capable of creating new content—text, images, audio, video, code, and even synthetic data. Powered by large-scale neural networks and trained on vast datasets, GenAI systems such as GPT, Claude, and diffusion models demonstrate the ability to mimic human creativity, solve complex problems, and automate cognitive tasks previously considered exclusive to human intelligence. As a result, GenAI is rapidly reshaping the boundaries of innovation and redefining how individuals and industries interact with technology.

The impact of GenAI is evident across diverse sectors. In education, AI-driven tutoring systems personalize learning experiences and assist educators in designing engaging content. In healthcare, GenAI supports diagnosis, drug discovery, and simulation-based medical training. Creative industries are experiencing a digital renaissance, with artists, designers, and filmmakers leveraging AI tools to accelerate ideation and production. Businesses use GenAI for predictive analytics, automated report generation, customer engagement, and workflow optimization, significantly improving productivity. The versatility of GenAI enables both experts and non-experts to innovate more rapidly and efficiently.

Despite its immense benefits, GenAI brings challenges that demand thoughtful consideration. Concerns around data privacy, misinformation, intellectual property rights, and ethical use have become central to global discussions. The ability of GenAI to generate realistic but fabricated content raises questions about authenticity and security, while its reliance on massive datasets highlights risks of bias and unfair decision-making. Addressing these issues requires robust regulations, transparent development practices, and responsible deployment strategies to ensure AI systems remain aligned with human values and societal needs.

Looking ahead, GenAI is poised to play an even more significant role in shaping the future. Advancements toward more autonomous and self-improving models bring us closer to Artificial General Intelligence (AGI), with profound implications for science, industry, and daily life. As organizations and governments adopt GenAI at scale, the focus must remain on building trustworthy, inclusive, and human-centric AI ecosystems. With the right balance of innovation and governance, GenAI has the potential to unlock unprecedented opportunities and drive solutions to some of the world's most pressing challenges.

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

QUANTUM-ENABLED MLOPS: THE NEXT FRONTIER IN AI OPERATIONS

Machine Learning Operations (MLOps) is entering a new era as quantum computing and quantum-inspired technologies begin to reshape how AI systems are built, optimized, and managed. With the growing scale and complexity of modern machine learning models, traditional MLOps pipelines increasingly struggle with optimization bottlenecks, hyperparameter tuning, training efficiency, and resource consumption. Quantum principles such as superposition, entanglement, and quantum optimization offer a powerful new toolkit to address these challenges by enabling faster and more efficient exploration of high-dimensional solution spaces.

This article explores how quantum and hybrid quantum–classical approaches can seamlessly enhance existing MLOps workflows across the entire AI lifecycle—from data preparation and model training to deployment, monitoring, and continuous improvement. Recent advances in quantum machine learning algorithms, quantum annealing techniques, and cloud- accessible quantum platforms are highlighted as key drivers enabling the next generation of AI operations. The role of quantum-inspired optimization methods in improving model performance while reducing operational overhead is also discussed.

Beyond technology, successful adoption of quantum-enabled MLOps requires organizational readiness. This includes upskilling teams, evolving infrastructure, and designing interoperable systems that bridge classical AI pipelines with emerging quantum platforms. Practical considerations such as cost, scalability, and integration maturity remain critical for real-world deployment.

By offering a forward-looking yet practical perspective, this article aims to create awareness among students, researchers, and industry professionals on how MLOps is evolving in the quantum era—and why preparing today's AI pipelines for quantum integration will be essential to sustain innovation in future intelligent systems.

Prof. Sindhu A
Assistant Professor
Dept. of CSE (DS)

LARGE LANGUAGE MODELS (LLMS): TRANSFORMING HUMAN–COMPUTER INTERACTION

Large Language Models (LLMs) represent a significant breakthrough in the field of Natural Language Processing. These models are designed to understand, interpret, and generate human language in a way that closely resembles natural communication. Built using deep learning techniques and trained on vast amounts of text data, LLMs have the ability to capture linguistic patterns, context, and meaning at an unprecedented scale.

Recent advancements have led to the development of powerful models such as GPT-4/5, LLaMA, Gemini, and Claude. These models can perform a wide range of language-based tasks including text generation, summarization, translation, question answering, and code assistance. Their ability to respond coherently and contextually has made them highly effective in real-world applications.

In education, LLMs are being used as intelligent tutors, helping students understand complex concepts, generate study material, and receive personalized learning support. In healthcare, they assist in analyzing clinical notes, supporting medical documentation, and enabling conversational agents that provide preliminary guidance to patients. Similarly, in research and content creation, LLMs help draft reports, review literature, and generate high-quality written content efficiently.

One of the key strengths of LLMs is their adaptability across domains. With fine-tuning, these models can be customized for specialized areas such as mental health, legal analysis, finance, and customer support. This flexibility allows organizations to deploy AI solutions that are both scalable and domain-aware.

Despite their benefits, LLMs also raise important challenges related to data privacy, bias, and ethical use. Ensuring responsible deployment through transparent design, human oversight, and ethical guidelines is essential to build trust in these systems.

Overall, Large Language Models are reshaping the way humans interact with machines. As research continues to improve their accuracy, explainability, and efficiency, LLMs are expected to play a central role in shaping the future of intelligent and human-centric AI systems.

Prof. Souramita Bhowmik
Assistant Professor
Dept. of CSE (DS)

FROM SMOG TO SENSORS: HOW ENGINEERING IS ARCHITECTING THE FUTURE OF AIR QUALITY

The invisible crisis of the Atmospheric Quality Index (AQI) has moved from the margins of environmental research to the center of global engineering concern. In many urban regions, concentrations of particulate matter such as PM2.5 and PM10 exceed World Health Organization safety limits by alarming margins. This escalation has redefined the role of engineers: no longer limited to observing environmental data, they are now responsible for designing systems that can actively measure, predict, and improve the quality of the air we breathe.

For decades, air quality monitoring relied on a small number of expensive, government-operated stations. Although accurate, these stations functioned as isolated data points, failing to capture street-level variations caused by traffic flow, building geometry, and localized weather patterns. This lack of spatial resolution represents a major engineering gap. The solution is emerging through dense networks of low-cost sensors, where computer science and electronics play a pivotal role in creating scalable, real-time monitoring infrastructures.

The integration of IoT and edge computing has enabled a new generation of AQI systems. By deploying thousands of compact sensor nodes equipped with electrochemical and optical particulate sensors, cities can be wrapped in a high-resolution digital layer. However, transmitting continuous raw data from such networks is inefficient and energy-intensive. Edge intelligence, powered by TinyML, allows data to be processed locally, ensuring that only meaningful anomalies are transmitted. This not only reduces bandwidth usage but also extends sensor lifespan and system reliability.

Engineering interventions are also expanding into predictive and corrective domains. Urban digital twins now combine real-time AQI data with computational fluid dynamics to simulate how infrastructure changes influence airflow and pollution dispersion. At the same time, active rectification technologies such as ionization-based smog towers and bio-hybrid systems like microalgae “liquid trees” are being explored to directly reduce pollutant levels. Addressing atmospheric imbalance demands collaboration across disciplines—from materials science and data analytics to electrical and mechanical engineering. Ultimately, restoring air quality is a systems-level challenge, and engineering remains the most powerful means to bring the atmosphere back into equilibrium.

Prof. Mithun Kumar
Assistant Professor
Dept. of CSE (DS)

THE GROWING IMPACT OF DATA SCIENCE IN EVERYDAY LIFE

In recent years, data science has evolved from a niche technical discipline into a transformative force shaping nearly every aspect of modern life. From the smartphones we use to the policies governments design, data-driven decision-making has become central to innovation, efficiency, and progress. At its core, data science combines statistics, mathematics, programming, and domain knowledge to extract meaningful insights from raw data. What makes it especially powerful today is the unprecedented scale of data being generated through social media, sensors, transactions, healthcare systems, and digital platforms. This explosion of data has opened doors to smarter systems and more informed decisions.

One of the most visible applications of data science is in artificial intelligence and machine learning. Recommendation systems on streaming platforms, fraud detection in banking, personalized learning in education, and predictive diagnostics in healthcare are all driven by data-centric models. These systems not only automate processes but also improve accuracy and adaptability over time.

In academia, data science has become an essential skill set across disciplines. Engineers, economists, social scientists, and even humanities researchers now rely on data-driven methods to validate hypotheses and uncover patterns that were previously invisible. As educators, it is our responsibility to equip students not only with technical expertise but also with critical thinking, ethical awareness, and interpretability skills.

Ethics and responsibility play a crucial role in this data-driven era. Issues such as data privacy, algorithmic bias, transparency, and fairness must be addressed alongside technical advancements. A well-trained data scientist must understand the societal implications of models and decisions, ensuring technology benefits all sections of society.

Looking ahead, the future of data science lies in interdisciplinary collaboration, explainable AI, and responsible innovation. As industries continue to rely on data for strategic decisions, the demand for skilled, ethical, and adaptable data scientists will only grow.

Prof. Snigdha Sikha Kashyap
Assistant Professor
Dept. of CSE (DS)

PROGRAMME EVENTS

DEVOPS & MLOPS
FIVE DAYS FACULTY DEVELOPMENT PROGRAM
30TH JUNE TO 4TH JULY 2025

The Department of CSE (Data Science) successfully organized a five-day Faculty Development Program (FDP) **"DevOps & MLOps"** from 30th June to 4th July 2025, with the objective of equipping participants with practical skills in modern machine learning deployment and lifecycle automation.

The FDP witnessed an enthusiastic response with 100 registrations and over 80 active participants, including faculty members, Heads of Departments (HoDs), and postgraduate (M.Tech) students from various engineering departments. The sessions were conducted by expert speakers from Fractal Analytics, Bengaluru, and Sapthagiri NPS University, who provided hands-on training using tools such as Git, Docker, Jenkins, Kubernetes, MLflow, and Airflow.

Coordinators: Dr. Suresh A, Prof. Sindhu A, Prof. Manjula M, Prof. Godhandaraman

Each day of the FDP focused on a key concept:

- Day 1: Git & GitHub – ML version control workflows (Mr. Kiran Kumar)
- Day 2: Docker – Containerizing ML applications (Dr. M.N. Saroja)
- Day 3: Jenkins – Automating model build pipelines (Dr. S. Kannan)
- Day 4: CI/CD & Kubernetes – Scalable deployment (Mr. Dinesh Jothiram)
- Day 5: MLflow & Airflow – Experiment tracking and orchestration (Internal Experts)

Participants worked on real-time end-to-end ML projects, with final-day presentations showcasing their learning outcomes. The FDP directly supports SDG 4 (Quality Education) and SDG 9 (Industry, Innovation & Infrastructure), aligning with DSU's mission to blend academic excellence with industry-driven knowledge.

We sincerely thank you for your valuable support throughout the five-day Faculty Development Program organized under the guidance of the Dr. Shaila S G, Professor & Chairperson, CSE (Data Science).

MOU
DAYANANDA SAGAR UNIVERSITY (DSU) & NEXUSIQ SOLUTIONS LLP, HYDERABAD
3RD JULY, 2025

Overview of NexusIQ Solutions LLP
NexusIQ Solutions LLP is a Hyderabad-based technology-driven organization, registered under the LLP Act, 2008. The company specializes in delivering advanced data-driven software solutions, enterprise integration systems, analytics platforms, and AI-powered automation services. With operations spanning sectors such as healthcare, finance, and smart infrastructure, NexusIQ offers scalable digital transformation capabilities to a wide range of industries.

Purpose of the Collaboration:
This Memorandum of Understanding (MoU) marks the beginning of a collaborative partnership between Dayananda Sagar University (DSU) and NexusIQ Solutions LLP to bridge academic excellence with real-world industry innovation. The MoU was officially signed on 3rd July 2025, during a ceremony held at the university's Board Room. Initiated by Dr. Shaila S. G., Professor and Chairperson, and Dr. Suresh A., Associate Professor, Department of CSE (Data Science), this collaboration aims to strengthen competencies in Data Science, AI/ML, Software Engineering, and Full Stack Development through joint academic, research, and training initiatives.

Key Areas of Collaboration
- Skill Development & Training: Joint design and delivery of training programs, workshops, and expert sessions for students and faculty in key technological areas.
- Research & Innovation: Execution of applied research projects, industry-focused case studies, and participation in innovation challenges.
- Access to Technology: NexusIQ will provide access to APIs, platforms, and software tools to support learning and project work.
- Faculty Development Programs (FDPs): Certification programs, sabbaticals, and exposure to real-time industry practices for faculty members through online and on-site formats.
- Curriculum Enhancement: NexusIQ will offer strategic inputs to align DSU's curriculum with evolving technological and industry trends.

Expected Outcomes
- Improved industry readiness among students
- Enhanced research output and relevance
- Upgraded teaching methodologies and lab infrastructure
- Stronger academia–industry collaboration

The MoU signing ceremony was attended by representatives from NexusIQ Solutions, the Hon'ble Vice Chancellor, the Pro Vice Chancellor, the Dean of the School of Engineering, the Chairpersons of all departments, and faculty members from the Department of CSE (Data Science).

ORIENTATION PROGRAM 3RD & 5TH SEMESTER
11TH AUGUST 2025

The Dept. of CSE (DS) organized a 3rd Semester Orientation Program on 11th August 2025, facilitated by Prof. Chandrakala L., Prof. Prapti Bhattacharjee, and Dr. Santhosh Kumar. The primary objective of the program was to familiarize students with the academic structure, course expectations, and evaluation components for the upcoming semester. The session, attended by around 180 students, included an interactive doubt-clearing segment led by faculty experts and student coordinators. The event began with an inaugural address by Dr. Shaila S. G., Chairperson, Dept. of CSE (DS), who provided an overview of the courses offered.

The orientation covered core subjects, special topic projects, placement activities, and career development insights. Faculty members also explained the CIA components for each course, ensuring students understood the assessment procedures. The program concluded with the selection of Class Representatives (CRs) and Class Committee members for the 3rd semester.

Key Outcomes:

1. Students gained clarity on core courses and semester expectations.
2. CIA components and assessment patterns were clearly understood.
3. Awareness of placement activities and career pathways was enhanced.
4. Academic and course-related doubts were effectively resolved.
5. Class representatives and Class Committee members were successfully selected.

CONTD.

The Department of CSE (Data Science) conducted the 5th Semester Orientation Program for the academic year 2025–2026 on 11th August 2025, led by Prof. Godhandaraman T and Prof. Sindhu A. The session opened with an address by Dr. Shaila S. G., Chairperson, who provided an overview of the courses offered. The program included informative presentations and a doubt-clearing session supported by faculty experts and student coordinators.

Session Objectives

- To provide insights into the 5th semester courses.
- To introduce placement activities and expectations.

The orientation familiarized students with the academic structure, departmental policies, and discipline guidelines. Key points included the class timetable, syllabus distribution, and the 60:40 CIE–SEE evaluation scheme. Students were briefed on department hierarchy, class committee structure, attendance requirements, dress code, ID card rules, mobile phone restrictions, and safety measures—especially avoiding fake social media groups.

The importance of mentoring, placement readiness, and professional communication was emphasized. Students were instructed to follow the timetable, attend classes in designated rooms, and maintain regular interaction with faculty. A minimum of 85% attendance is mandatory for SEE eligibility, with limited leave allowed only on valid grounds. Attendance updates are mandatory for official duties, and any MSE absence must be formally reported within two days.

Placement activities will be coordinated by Dr. Vijay Kumar and Prof. Shivamma D. Students were encouraged to participate in coding contests, workshops, and placement-readiness activities offered through the Talently Platform, which supports skill building and preparation for on-campus and off-campus recruitment. Official communication will occur through department-managed WhatsApp groups, Google Groups, and Google Classrooms, with strict expectations for professional conduct.

BRIDGE COURSE ON "PYTHON AND C FOR PROBLEM-SOLVING"

18TH AND 19TH AUGUST 2025

Dayananda Sagar University, School of Engineering, Department of CSE (Data Science), in collaboration with the IEEE ITS Society and the DataScience@DSU Club, successfully conducted a two-day Bridge Course on “Python and C for Problem-Solving” on 18th and 19th August 2025 at CDSIMER Lecture Hall 1, G Block. The event was organized by Prof. Shivamma D. and Prof. Prapti Bhattacharjee, Dept. of CSE (DS).

A unique highlight of the program was its student-driven model. The sessions were conceptualized, organized, and delivered entirely by 3rd-year CSE (DS) students for their juniors in the 2nd year. With around 170 students participating, the peer-to-peer learning approach strengthened foundational programming skills while fostering mentorship, teamwork, and a collaborative learning culture within the department.

The initiative directly supports SDG 4: Quality Education, promoting skill-based learning and enhancing technological competencies through active student participation.

Key Outcomes:

1. Strengthened foundational programming skills in Python and C among 2nd-year students.
2. Promoted effective peer-to-peer learning through student-led sessions.
3. Enhanced communication, leadership, and teaching skills among 3rd-year student instructors.
4. Fostered a collaborative and supportive learning environment.
5. Contributed to SDG 4 by advancing inclusive, skill-based, and quality education.

ORACLE ACADEMY INITIATION & INAUGURATION

25TH AUGUST, 2025

CONTD.

The Oracle Academy Inauguration was organized by the Department of CSE (Data Science), School of Engineering, Dayananda Sagar University, on 25th August 2025 at A-411, 4th Floor, SOE. The event marked the beginning of a strategic collaboration with Oracle Academy, a global initiative by Oracle Corporation that supports education and skill development in advanced technologies. This partnership aims to strengthen students' and faculty members' capabilities in database management, cloud computing, artificial intelligence, data analytics, and other emerging fields. The program was successfully coordinated by Dr. Suresh Arumugam, Associate Professor, Prof. Godhandaraman T, Assistant Professor; and Prof. Sindhu A, Assistant Professor from the Department of CSE (Data Science). Approximately 150 students took part in the event.

Objective of the Event

- Formally launch Oracle Academy at DSU.
- Introduce students and faculty to Oracle learning resources and certification pathways.
- Promote awareness of emerging and industry-relevant technologies.
- Strengthen the connection between academia and industry.

Beneficiaries

- Students: enhanced skills, certification opportunities, career readiness.
- Faculty: access to advanced teaching resources and professional development.
- Institution: improved industry linkage and global visibility.
- Industry: availability of graduates trained in modern tools and technologies.

Guests

- Chief Guest: Mr. Ashutosh Naik, Director of Software Development, Oracle.
- Dr. Udaya Kumar Reddy K. R, Dean, SOE.
- Dr. Shaila S. G., Chairperson, Department of CSE (Data Science).

Event Summary

The program began with a welcome address, followed by a thought-provoking keynote by Mr. Ashutosh Naik, who highlighted the importance of skill-based learning and Oracle's role in empowering educational institutions. A TechTalk session (10:00 AM – 1:00 PM) on NoSQL Databases explored core concepts, architecture, comparisons with RDBMS, and real-world applications such as Netflix, e-commerce, social media platforms, and COVID-19 data analytics. Strategies for adopting NoSQL solutions in cloud environments in a cost-effective manner were also discussed.

The Inauguration Ceremony (1:00 PM – 2:00 PM) officially launched the Oracle Academy at DSU, symbolizing a significant step toward strengthening technological expertise and academic–industry collaboration. The event concluded with a vote of thanks, marking the beginning of a promising partnership aimed at fostering innovation, professional growth, and global competence within the university.

ALUMNI MEET 2025
23RD AUGUST, 2025

TThe Department of Computer Science and Engineering (Data Science), School of Engineering, under the leadership of Dr. Shaila S. G., Chairperson, organized the “Alumni Meet 2025” on 23rd August 2025 at Room A440, A Block, SOE. The event was coordinated by Prof. Manjula M., Prof. Souramita Bhowmik, Prof. Mriganka Das, and Prof. Monish L.

The meet saw enthusiastic participation from 8th-semester B.Tech students, faculty members, and distinguished alumni. It served as an excellent platform for networking, mentorship, and knowledge sharing, strengthening the connection between alumni and current students.

Two notable alumni were invited as guests:

- Ms. Volati Bhavana, currently pursuing higher studies in Canada, shared her academic journey and offered guidance on preparing for global opportunities.
- Mr. Pranjal, the highest package holder of his batch, provided insights into his career journey, placement preparation strategies, and real-world industry expectations.

The alumni motivated final-year students to explore diverse career paths, develop strong technical skills, and maintain confidence in their goals. Students gained valuable guidance on choosing suitable career tracks, pursuing higher education, and preparing for industry challenges.

The event concluded with an interactive Q&A session, followed by a vote of thanks and group photographs. The Alumni Meet 2025 successfully celebrated alumni achievements and strengthened the bond between the institution, its alumni, and the student community.

CAREER READINESS AND PLACEMENT ORIENTATION
5TH & 7TH SEMESTER
30TH AUGUST, 2025

The "Career Readiness & Placement Orientation Program" was held on 30th August 2025 at 10:00 AM, organized by the Department of Computer Science and Engineering (Data Science), School of Engineering, Dayananda Sagar University (DSU). The event was conceptualized under the guidance of Mr. Vijay Kumar, Director – Placement Cell, SOE, and Dr. Shaila S. G., Professor & Chairperson, Dept. of CSE (Data Science), with support from the Placement Coordinator. The program was effectively organized by Prof. Shivamma D. and Prof. Megha Chandel, Assistant Professors, Dept. of CSE (Data Science).

The orientation was specifically designed for around 40 seventh-semester students, providing them with a structured platform to understand the placement process, learn recruiter expectations, and adopt effective strategies for career success. The session aimed to bridge the gap between academic learning and industry requirements, ensuring students are well-prepared to face recruitment challenges and future professional opportunities.

Objective of the Event:

The Career Readiness & Placement Orientation Program addressed the multi-dimensional needs of students preparing for professional roles. The key objectives included:

- To familiarize students with the complete campus placement process, from registration to final selection.
- To enhance technical competencies and problem-solving skills essential for aptitude tests and coding rounds.
- To strengthen communication skills, body language, and confidence required for group discussions and personal interviews.
- To provide exposure to current industry trends, employer expectations, and evolving recruitment patterns.
- To instill self-motivation, career awareness, and proactive planning for professional growth.

CONTD.

The “Placement Orientation Program” was held on 3rd September 2025 at 9:30 AM, organized by the Placement Cell, School of Engineering, Dayananda Sagar University (DSU). The session was coordinated by the Department of Computer Science and Engineering (Data Science) under the guidance of Prof. Shivamma D., Prof. Megha Chandel, Dr. Shaila S. G. (Chairperson, Dept. of CSE – DS), and Mr. Vijay Kumar, Director – Placement Cell, SOE.

The orientation was conducted for 5th Semester A Section, with 52 students in attendance. Delivered by the Director of the Placement Cell, the session provided students with a clear understanding of the recruitment process, eligibility criteria, company expectations, and essential guidelines for participating in campus placement drives.

Objective of the Event

- To provide 5th semester students with a clear understanding of how the Placement Cell operates.
- To explain eligibility criteria, including minimum CGPA requirements, arrear policy, and required documentation for campus placements.
- To familiarize students with the standard recruitment process—from registration to final selection—including company-specific prerequisites.
- To create awareness about placement rules, regulations, and the importance of maintaining a professional dress code.
- To highlight the major companies visiting DSU for campus recruitment and outline their specific requirements.

LITERACY DAY CAMPAIGN IN RURAL SCHOOLS

3RD SEPTEMBER, 2025

CONTD.

The Department of CSE (Data Science) organized a Literacy Day Campaign in Rural Schools on 03rd September 2025, from 11:30 AM to 02:00 PM, across five villages: Linganapura, Gabbada, Doddamaralavadi, Kamalapura, and Dyavasandra, under the School of Engineering, Dayananda Sagar University, Kanakapura Road, Bengaluru. The program was successfully conducted with the support of Dr. Shaila S. G., Professor and Chairperson, Dr. Santhosh Kumar G., Associate Professor, Dr. U. Pavan Kumar, Prof. Prapti B., Prof. Shivamma D., Assistant Professor, Dr. K. S. Bhagyajyothi, Assistant Director Physical Education, and all faculty members of the Department of CSE Data Science.

The campaign aimed to promote the importance of literacy and strengthen foundational reading and writing skills among children in rural and underserved communities. Aligned with the vision of International Literacy Day, the initiative emphasized educational empowerment in regions where literacy levels remain affected by socio-economic and infrastructural barriers.

Objectives

- To raise awareness about the importance of literacy for individual and community growth.
- To improve foundational reading and writing skills among rural school children.
- To involve parents, teachers, and community leaders in supporting children's learning.
- To motivate children to develop regular reading habits and an interest in self-learning.

Impact and Outcomes

The campaign generated strong enthusiasm among students for literacy-based activities and encouraged consistent reading habits. Parents and teachers observed improved motivation and active participation in schoolwork among children. Support from community stakeholders helped foster a positive learning environment.

The initiative also highlighted the need for sustained efforts to address literacy challenges in rural regions through continuous support, resource enhancement, and inclusive educational programs. Overall, the campaign marked a meaningful step toward empowering rural children with essential literacy skills crucial for their academic success and future opportunities.

TEACHERS DAY CELEBRATION

12TH SEPTEMBER, 2025

The Teachers' Day Celebration was held on 12th September 2025 at CDSIMER, organized by the Department of Computer Science and Engineering (Data Science), School of Engineering, Dayananda Sagar University (DSU). The event was conducted under the able guidance and support of Dr. Shaila S. G., Professor & Chairperson, Department of CSE (Data Science), ensuring the smooth and successful completion of the program.

Teachers' Day is a significant occasion dedicated to honoring the relentless efforts, unwavering dedication, and invaluable contributions of teachers in shaping students' academic, professional, and personal growth. The celebration provided an opportunity for students to express their respect, gratitude, and admiration towards their mentors in a joyful and meaningful manner.

The program witnessed enthusiastic participation from students, who took the lead in organizing and managing the event. Various cultural performances such as songs, dances, skits, dramas, and poetry recitations were presented, reflecting creativity and heartfelt appreciation for teachers. The event was further enlivened by engaging games and interactive activities, encouraging teachers to participate alongside students, fostering a spirit of camaraderie and mutual respect. Teachers were also honored with personalized gifts, certificates, and tokens of appreciation, followed by a cake-cutting ceremony, symbolizing togetherness and gratitude.

The celebration created a warm and cheerful atmosphere, strengthening the bond between students and faculty members.

Objectives of the Event:

The Teachers' Day Celebration was organized with the following key objectives:

- To express sincere gratitude and appreciation to the teaching faculty for their dedication and commitment.
- To provide a platform for students to showcase their talents and convey respect towards their teachers.
- To strengthen the bond and mutual understanding between students and teachers.
- To create a joyful, engaging, and memorable experience for the entire academic community.
- To foster a culture of respect, affection, and appreciation within the department.

The event concluded on a joyful note, leaving teachers feeling valued and students enriched with meaningful memories, reinforcing the significance of teachers' contributions to education and society.

UTSAV-ONAM CELEBRATION
15TH SEPTEMBER, 2025

The DataScience@DSU Club, Department of Computer Science and Engineering (Data Science), School of Engineering, Dayananda Sagar University (DSU), organized "Utsav – Onam Celebration" on 15th September 2025 at LH2, A Block, School of Engineering. The event was organized under the guidance of Dr. Shaila S. G., Professor & Chairperson, and coordinated by Prof. Chandrakala L., Prof. Shivamma D., and Prof. Megha Chandel, Assistant Professors, Department of CSE (Data Science).

The event aimed to bring together students and faculty members to celebrate the cultural richness and traditional significance of Onam, the harvest festival of Kerala, symbolizing prosperity, unity, and harmony. The celebration highlighted the values of inclusiveness and cultural appreciation within the academic community.

The program featured vibrant decorations, traditional attire, and engaging activities that reflected the essence of Onam. Both students and faculty enthusiastically participated, sharing joyful moments that strengthened interpersonal bonds and departmental unity. The celebration created a lively and festive atmosphere, making it a memorable cultural experience for everyone involved.

Objectives of the Event:

- To promote cultural awareness and inclusivity among students and faculty.
- To celebrate the traditional significance of the Onam festival.
- To strengthen unity and togetherness within the department.
- To provide a joyful and interactive cultural platform for students

ENGINEERS DAY CELEBRATION

16TH SEPTEMBER, 2025

The Department of Computer Science and Engineering (Data Science), School of Engineering, Dayananda Sagar University, organized Engineers' Day on 16th September 2025 at LH3, DSU Campus, under the theme "Engineering the Future: Energy Humanities, Mental Health, and Technology." The event commemorated the birth anniversary of Sir M. Visvesvaraya, celebrating the contributions of engineers in nation-building.

The program was coordinated by Prof. Snigdha Sikha Kashyap, Prof. Mithun Kumar, and Prof. Shashank Shekhar, with active support from departmental leadership and faculty members.

The celebration commenced with a yoga and stress-relief session, fostering a calm and positive environment. The keynote address was delivered by Dr. Sreemathy, Assistant Professor – Technical English, who emphasized the integration of engineering with humanities and mental health. Students actively engaged in discussions, reflecting on engineering's broader social responsibilities.

Objectives of the Event:

- To honor Sir M. Visvesvaraya and celebrate Engineers' Day.
- To highlight interdisciplinary roles of engineering.
- To promote student well-being and mental health awareness.
- To encourage responsible, human-centric technological innovation.

CLEANLINESS DRIVE SWACHH BHARATH ABHIYAN

18TH SEPTEMBER, 2025

The Department of Computer Science and Engineering (Data Science) organized a "Cleanliness Drive" under Swachh Bharat Abhiyan on 18th September 2025 at Arena, Dayananda Sagar University, with the support of Dr. Shaila S. G., Professor & Chairperson (DS). The event was organized by Dr. Santhosh Kumar G., Associate Professor; Dr. U. Pavan Kumar; and Prof. Prapti B., Assistant Professors, along with active participation from all faculty members and students.

The drive aligned with the national mission launched by the Government of India to promote sanitation, hygiene, and civic responsibility. Activities included cleaning public spaces, spreading awareness on waste segregation, and encouraging sustainable hygiene practices.
The initiative instilled a strong sense of social responsibility and environmental awareness among students, reinforcing the importance of cleanliness in daily life and community well-being.

Objectives of the Event:

- To promote cleanliness and hygiene awareness.
- To encourage civic responsibility among students.
- To support the Swachh Bharat national mission.
- To foster environmental sustainability.

AYUDHA PUJA

9TH SEPTEMBER, 2025

The Department of Computer Science and Engineering (Data Science) celebrated “Ayudha Puja” on 9th September 2025 with great devotion and enthusiasm. The event began with traditional rituals and prayers seeking blessings for knowledge, wisdom, and the ethical use of tools and technology.
The department premises were beautifully decorated with flowers and rangoli, creating a festive ambiance. Faculty members, staff, and students actively participated in the puja, symbolizing respect for instruments that support learning, innovation, and research.

The celebration concluded with the distribution of prasad and festive interactions, fostering unity, gratitude, and cultural appreciation within the department.

Objectives of the Event:

- To honor knowledge, tools, and technology.
- To promote cultural and traditional values.
- To strengthen unity among students and faculty.
- To blend tradition with academic spirit.

FROM CABLES TO CLOUDS: EXPLORING NETWORKING & CCNA

8TH OCTOBER, 2025

The Department of Computer Science and Engineering (Data Science), School of Engineering, Dayananda Sagar University (DSU) organized a technical and career-oriented session titled "From Cables to Clouds: Exploring Networking & CCNA" on 8th October 2025. The event witnessed enthusiastic participation from 165 students, highlighting strong interest in networking technologies and infrastructure-oriented career pathways.

The session was delivered by Mr. Chirag Dhall, an industry expert with extensive experience in networking and enterprise infrastructure solutions. The speaker provided a comprehensive overview of networking fundamentals, covering core concepts such as the OSI Model, TCP/IP architecture, subnetting, routing, and switching. Emphasis was placed on the relevance of these concepts in modern cloud-based and enterprise environments.

A significant portion of the session focused on CCNA certification, where students were guided on certification structure, preparation strategies, and its importance in building a strong networking career. Career pathways in networking, cloud infrastructure, and cybersecurity were discussed in detail, helping students align their academic learning with industry expectations.

Participant feedback reflected overwhelming success, with high ratings for content relevance, knowledge transfer, and speaker engagement. The session concluded with a discussion on future learning pathways and recommendations for advanced workshops and hands-on training modules.

Objectives of the Event:

- To strengthen students' understanding of networking fundamentals.
- To create awareness about CCNA certification and career opportunities.
- To bridge theoretical concepts with real-world industry applications.
- To motivate students towards infrastructure and cloud-based careers.

AI CAREER READINESS – SKILLS THAT GET YOU HIRED

11TH OCTOBER, 2025

The Department of Computer Science and Engineering (Data Science), School of Engineering, Dayananda Sagar University, in collaboration with NexusIQ Solutions LLP, Hyderabad, successfully organized a live webinar titled "AI Career Readiness – Skills That Get You Hired" on 11th October 2025 at 11:00 AM. The webinar was designed to guide students and early-career professionals in navigating the rapidly evolving Artificial Intelligence job market.

The session was conducted by Mr. Akash Saxena, Senior Industry Mentor at NexusIQ Solutions LLP, an expert in AI talent readiness and corporate training. He provided a detailed overview of current AI industry trends, emerging job roles such as AI Engineer, Machine Learning Developer, Data Scientist, and the skills recruiters actively seek in fresh graduates.

The speaker emphasized the importance of mastering Python, Machine Learning, Deep Learning, Natural Language Processing (NLP), Prompt Engineering, and MLOps, along with building strong project portfolios. Practical guidance was shared on optimizing LinkedIn and GitHub profiles, certifications, and participation in internships and live projects to improve employability.

The webinar featured an interactive Q&A session, where students clarified doubts regarding career planning, skill selection, and certification pathways. The session concluded with an introduction to the NexusIQ AI Career Accelerator Program, offering mentorship, hands-on projects, and internship opportunities.

Objectives of the Event:

- To familiarize students with AI career opportunities and industry demands.
- To highlight essential technical and professional skills required by employers.
- To encourage strategic career planning and continuous upskilling.
- To strengthen industry–academia collaboration for career readiness.

HACKVERSE'25

OCTOBER 13, 2025

The IEEE Information Theory Society Student Branch, Dayananda Sagar University (DSU), organized "HackVerse'25", a one-day technical hackathon on 13th October 2025, at the Department of CSE (Data Science), School of Engineering. The event was conducted as part of the IEEE Day celebrations, promoting innovation, creativity, and collaborative problem-solving among students.

HackVerse'25 provided a dynamic platform for students to ideate, design, and develop real-world problem-solving solutions across five major domains: Artificial Intelligence & Machine Learning, FinTech, Healthcare, EduTech, and Cybersecurity. Participants worked in teams under time constraints, demonstrating strong technical skills, creativity, teamwork, and presentation abilities.

The event began with an inaugural session followed by an idea presentation round, where teams showcased their proposed solutions. In the second half of the hackathon, the event was graced by Ms. Roobini Ganesan, IEEE Day Organizing Member, IEEE Bengaluru Chapter, and Dr. Arun Balodi, Chairperson, Department of ECE, DSU. The distinguished guests shared valuable insights on innovation, research culture, and the significance of IEEE in professional growth, inspiring students to pursue excellence.

After multiple rounds of evaluation by expert judges, the top-performing teams were recognized for their innovation, feasibility, and presentation skills. The hackathon concluded with a felicitation ceremony and vote of thanks, celebrating the success of the event.

Winners of HackVerse'25:

- Winner: Team Astros
- 2nd Runner-Up: Team HealthCore
- 3rd Runner-Up: Team SkillSpark

HackVerse'25 successfully fostered a culture of innovation and collaborative learning, making it a memorable IEEE Day celebration and a valuable experiential learning opportunity for students.

PRODUCT DEVELOPMENT USING EMERGING TECHNOLOGIES
5 DAYS VALUE-ADDED COURSE
17TH NOVEMBER TO 21ST NOVEMBER, 2025

The Department of CSE (Data Science) at Dayananda Sagar University, in association with NexusIQ Solutions, recently organized a five-day Value-Added Course (VAC) on "Product Development Using Emerging Technologies." The program was conducted from 17th November to 21st November, 2025, exclusively for the 5th and 7th semester B.Tech (Data Science) students. A total of 120 students actively participated in the program. The event, held from November 17th to 21st, 2025 was headed by Dr. Shaila S G, Professor and Chairperson, along with Dr. Suresh Arumugam, Associate Professor; Prof. Godhandaraman T, Assistant Professor, Prof. Sindhu A, Assistant Professor; and Prof. Mithun, Assistant Professor, from the same department.
The VAC was coordinated under the leadership of the Department of CSE (Data Science), with sessions delivered by industry experts from NexusIQ. The primary aim of this program was to expose students to real-world product development workflows and equip them with the skills needed to build AI-powered applications by integrating Generative AI, LLMs, and modern deployment platforms

Resource Person: Mr. Chaganti Sai Ram, CTO, NexusIQ Solutions, Telangana

Objectives

- To bridge the gap between industry and academia by familiarizing students with modern product development methodologies.
- To introduce participants to Generative AI, LLMs, and Prompt Engineering, and demonstrate their application in real-world product workflows.
- To engage students in hands-on development of functional prototypes using React/Next.js, Python/Flask, and cloud deployment tools.
- To demonstrate adaptability in hybrid work environments, combining both online and offline learning effectively.

Outcome

- Enhanced Product-Building Mindset: Students gained a clear understanding of how real-world products evolve from ideation to deployment, strengthening their ability to think end-to-end.
- Improved Technical Confidence: Participants developed stronger coding and integration skills by working directly with modern frameworks like React, Flask, and cloud deployment tools.
- Industry Exposure: Interaction with NexusIQ experts helped students understand current industry expectations, development standards, and best practices in AI-driven workflows.
- Collaborative Learning: Team-based development improved communication, problem-solving, and the ability to work in agile, fast-paced environments similar to real industry settings.

EMPOWERING MINDS, ENRICHING LIVES – MENTAL HEALTH AWARENESS SESSION

11TH NOVEMBER, 2025

The Department of Computer Science and Engineering (Data Science), School of Engineering, Dayananda Sagar University, in association with the DataScience@DSU Club, organized a "Mental Health Awareness Session" titled "Empowering Minds, Enriching Lives" on 11 November 2025 at LH-3, SOE.

The session was conducted from 8:30 AM to 10:30 AM and received active participation from students, faculty members, and student coordinators.

The session aimed to create awareness about mental well-being, reduce stigma around mental health conversations, and help students understand the importance of emotional balance during academic and personal challenges.

The resource person provided important insights on stress management, emotional resilience, early signs of psychological distress, and practical coping mechanisms. The event offered a safe and supportive environment for open conversations on mental health.

Resource Person: Mr. Vishwesh K, Psychiatric Social Worker, Department of Psychiatry, CDSIMER

Objectives:

- To raise awareness about mental health among students.
- To highlight the importance of emotional and psychological well-being.
- To guide students on stress management and healthy coping strategies.
- To create an open interactive platform with a mental health professional.
- To reduce stigma associated with seeking help for mental health issues.
- To help students maintain balance during academic pressure.

Outcome:

The session helped students understand the importance of mental well-being and taught them simple techniques for managing stress. It encouraged open conversations about mental health and motivated students to seek support when needed. Overall, the event created awareness and promoted a positive and supportive environment in the department.

PARENTS-TEACHERS MEETING

22ND NOVEMBER, 2025

The Department of Computer Science and Engineering (Data Science), School of Engineering, Dayananda Sagar University, conducted a Parents–Teachers Meeting (PTM) for 3rd, 5th and 7th Semester on 22nd November 2025 to strengthen the communication between parents and teachers. The session aimed to discuss students' academic performance, attendance, behaviour, strengths, and areas of improvement. The PTM provided a platform for parents to understand their child's learning progress and offer feedback for better academic support.

Objective of the Event

- To discuss individual student performance in academics.
- To review attendance, classroom behavior, and participation.
- To address concerns raised by parents regarding teaching and learning.
- To provide guidance for improving study habits and discipline.
- To establish a stronger partnership between parents and the institution.

Outcome

The meeting ended with a sense of cooperation, shared responsibility, and commitment toward students' academic excellence and personal growth. Parents expressed appreciation for the efforts of the faculty, while teachers acknowledged the valuable feedback provided. The institution looks forward to continued collaboration to create a supportive and inspiring learning environment for every student.

WOMEN EMPOWERMENT, CHILD DEVELOPMENT AND EDUCATIONAL AWARENESS

7TH NOVEMBER, 2025

The NSS volunteers of the Dayananda Sagar University, CSE (Data Science) Department, conducted a community outreach initiative on 7th November 2025, focusing on Women Empowerment, Child Development and Educational Awareness. The programme covered three villages: Linganapura, Konasandra, and Bannikuppe.
The initiative involved enthusiastic participation from around 200 students representing three sections, along with support from dedicated 5th-semester volunteers. The programme was guided and supervised by faculty members Dr. Santhosh Kumar G, Dr. U Pavan Kumar, Prof. Prapti Bhattacharjee, and Prof. Kishor Malakar, whose leadership ensured effective coordination and smooth execution of all activities.

Objectives

- To promote gender equality by empowering women with knowledge, confidence, and access to opportunities.
- To support the physical, emotional, and social development of children through awareness and guidance.
- To highlight the importance of education as a fundamental right for every individual.
- To encourage communities to actively participate in initiatives that uplift women and children.
- To spread awareness about government schemes, welfare programs, and social resources available for women and children.
- To build a supportive environment that nurtures learning, safety, and personal growth.

Outcome

Overall, the outreach programme was highly impactful and enriching. It provided students with valuable exposure to real-world community needs while enabling them to contribute meaningfully to social development. The Data Science Department looks forward to analysing the collected data and using the findings to plan future initiatives that promote empowerment, education, and sustainable growth in these communities.

MEGA BLOOD DONATION DRIVE 2025

19TH NOVEMBER, 2025

CONTD.

The Department of Student Affairs and CSE (Data Science), in collaboration with DSU, CDSIMER, and the Indian Red Cross Society, successfully organized the Mega Blood Donation Drive 2025 on 19th November 2025 at The Arena, DSU Main Campus. The initiative aimed to foster a sense of social responsibility among students and staff while supporting the critical need for blood during medical emergencies.

The drive commenced at 10:00 AM and received overwhelming participation from both students and faculty. Notably, students and faculty members from the CSE (Data Science) Department actively contributed by volunteering and donating blood. Their commitment ensured seamless coordination, effective donor assistance, and smooth management of registration activities throughout the event.

With the enthusiastic involvement of 20+ students and faculty and the strong support of student volunteers, the initiative achieved remarkable success. The leadership and supervision of Dr. Santhosh Kumar G, Dr. U. Pavan Kumar, Prof. Prapti Bhattacharjee, and Prof. Kishor Malakar ensured flawless coordination and smooth execution throughout the program.

Objectives

- To encourage students and staff to contribute to society through voluntary blood donation.
- To spread awareness about the importance of blood donation in saving lives during medical emergencies.
- To address the growing need for safe and adequate blood supply in hospitals.
- To foster social responsibility, compassion, and community engagement within the DSU campus.
- To provide a safe and well-coordinated platform in collaboration with medical professionals for blood donation.

Outcome

The environment was filled with enthusiasm and positive energy as donors stepped forward with the noble intent of saving lives. With the expertise of the Indian Red Cross Society, all procedures were carried out following strict safety standards, ensuring secure handling of blood donations.
This impactful initiative highlighted the compassion, unity, and service-oriented spirit of the DSU community.

GALLERY


Ramanagara,Karnataka,India


Ramanagara, Karnataka, India


Ramanagara, Karnataka, India

FACULTY ACHIEVEMENTS

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

Research Publication

- L. Monish and **S. G. Shaila**, "A Hybrid Fuzzy CNN–LSTM Approach for Emotion Recognition from EEG–ECG Physiological Signals", Eng. Technol. Appl. Sci. Res., vol. 15, no. 6, pp. 30405–30411, Dec. 2025.
- V. Inamdar and **S. G. Shaila**, "An AI-Driven Diagnostic Decision Support System Using EP-Optimized RBF Neural Networks for Breast Cancer Detection", Eng. Technol. Appl. Sci. Res., vol. 15, no. 6, pp. 30340–30348, Dec. 2025.
- Monish, L., **Shaila, S.G**. (2026). Electrocardiogram Signal-Based Analysis and Prediction of Emotions Using Deep Networks. In: Nanda, S.J., Mittal, H., Lim, MH. (eds) Proceedings of International Conference on Paradigms of Communication, Computing and Data Analytics. PCCDA 2025 2025. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-96-6843-4_18
- **S.G. Shaila** & Kumar, U. Pavan & Sg, Sumana. (2025). Speech Audio Analytics based Classification of Human Emotions using Machine Learning and Deep Learning Models. 10.1109/NGISE64126.2025.11085224.
- Shivamma. D and Shaila. S. G, "Deep Learning Based Analysis for Facial Expression Recognition of Simple and Complex Emotions in Healthcare," 2025 IEEE International Conference for Women in Innovation, Technology & Entrepreneurship (ICWITE), Bangalore, India, 2025, pp. 1-6, doi: 10.1109/ICWITE64848.2025.11307127.
- V. Inamdar and S. G. Shaila, "An AI-Driven Diagnostic Decision Support System Using EP-Optimized RBF Neural Networks for Breast Cancer Detection", Eng. Technol. Appl. Sci. Res., vol. 15, no. 6, pp. 30340–30348, Dec. 2025.

Patents

- Dr. Santhosh Kumar G, Dr. U. Pavan Kumar Prof. Godhandaraman T, Prof. Shivamma D & **Dr. Shaila S G** has published a patent title, Dynamic Energy Management System for Self-Powered IoT Devices using Intelligent Energy Harvesting on 26th September 2025 with Application No: 202541083566
- A MOBILE BOT DEVICE FOR NURSING OF PLANT SAPLING
- SYSTEM AND METHOD FOR DATA HIDING IN VIDEO COMMUNICATION USING STEGANOGRAPHY

FACULTY ACHIEVEMENTS

Dr. Shaila S G presented a research paper entitled "A CNN-GAN Integrated Framework for Enhanced Glaucoma Detection and Optic Cup Damage Estimation Using Fundus Images" at the Next Gen Tech Conference 2025 held on 14-07-2025.

Dr Shaila S G has participated in the Six Days Faculty Development Program on "Biomaterials & Nanomaterials in Biomedical and Clinical Applications" Organized by Department of Medical Electronics Engineering from 14th July to 19th July 2025.

Dr. Shaila S G for extending her support to PyNet Labs Private Limited for organising one day workshop on Networking Fundamentals on 7th October 2025 held at Shri Khushal Das University conducted by Pynet Labs.

Dr. Shaila S G & Prof. Shivamma D has participated & presented the paper titled "Deep Learning based analysis for facial expression recognition of simple & complex emotions in Healthcare" in the 3rd IEEE Conference for Women in Innovation, Technology and Entrepreneurship (ICWITE 2025) on 26-27 Sep 2025 organized by IEEE Women in Engineering Affinity Group Bangalore Section at B.G.S College of Engineering, Bangalore.

FACULTY ACHIEVEMENTS

Prof. Monish L & Dr. Shaila S G has participated & presented the paper titled "Mpox Risk Forecasting: Integrating Neural Networks and Public Sentiment Analysis" in the 3rd IEEE Conference for Women in Innovation, Technology and Entrepreneurship (ICWITE 2025) on 26-27 Sep 2025 organized by IEEE Women in Engineering Affinity Group Bangalore Section at B.G.S College of Engineering, Bangalore.

Dr. Shaila S G, Prof. Shivamma D & Dr. Santhosh Kumar G for presenting the research paper entitled "Pharmaceutical Quality Assurance via Transformer- Based Deep Learning Models for Automated Tablet Defect Detection" at The IEEE Technical sponsored 2nd International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF 2025) held at St. Joseph's Institute of Technology, Chennai on 09th & 10th October 2025.

Dr. Shaila S G for extending her support to PyNet Labs Private Limited for organising one day workshop on Networking Fundamentals on 7th October 2025 held at Shri Khushal Das University conducted by Pynet Labs.

Dr. Shaila S G & Prof. Shivamma D has participated & presented the paper titled "Deep Learning based analysis for facial expression recognition of simple & complex emotions in Healthcare" in the 3rd IEEE Conference for Women in Innovation, Technology and Entrepreneurship (ICWITE 2025) on 26-27 Sep 2025 organized by IEEE Women in Engineering Affinity Group Bangalore Section at B.G.S College of Engineering, Bangalore.

FACULTY ACHIEVEMENTS

The Department of Artificial Intelligence and Data Science at Sapthagiri NPS University organized an insightful Tech Talk titled "Insights of AI & DS." The session featured Dr. Shaila S. G., an accomplished academic with a B.Tech, M.Tech, and Ph.D. from NIT Trichy, currently serving as Professor and Chairperson of the Department of CSE (Data Science) at DSU. She shared valuable perspectives on emerging trends and applications in Artificial Intelligence and Data Science. The talk aimed to deepen students' understanding of the evolving technological landscape. Dr. Praveen Kumar K. V., Director of the Department of Artificial Intelligence and Data Science, coordinated the event. The session was held on 22 November 2025 at 11:00 AM in B-Block 403. Participants gained knowledge on real-world AI systems and data-driven methodologies. The event encouraged learners to explore advanced career paths in AI and DS. The Tech Talk successfully enhanced academic engagement and inspired students to pursue innovative research in the field.

Dr. Shaila S G has participated in the Supercomputing India 2025 focused on the convergence of HPC, AI, Quantum Computing, Semiconductors and Cybersecurity. It was held from December 9–13, 2025 at the Manipal Institute of Technology. The event brought together academicians, researchers, and industry experts from across the country. Participants gained insights into emerging technologies and national initiatives in advanced computing. The fostered collaboration and knowledge sharing in cutting-edge computational research

Dr. Shaila S. G, Prof. Shashank Shekhar presented a research paper titled Video Encryption and Decryption with Blockchain-Driven-Access-Control-Mechanism. The conference was organized in association with reputed academic and research organizations and publishers. A Certificate of Appreciation was awarded at the 6th International Conference on Data Engineering and Communication Technology (ICDECT-2025) held on 1st–2nd December 2025 at Bhubaneswar Engineering College, Bhubaneswar.

FACULTY ACHIEVEMENTS

Dr. Santhosh Kumar G
Associate Professor
Department of CSE (Data Science)

Dr. Santhosh Kumar G for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Dr. Santhosh Kumar G published a book title "Data Information and Security" by PENCIL BITZ publisher with ISBN: 978-93-48556-19-6 July 2025.

Dr. Santhosh Kumar G act as a Resource Person of 2 Day Workshop on Cyber Security at KLE College in association with Learn Online held on 09th & 10th August 2025.

Dr. Santhosh Kumar G has successfully completed the 2-Weeks online FDP on Data Science organized by SkillDzire in collaboration with AICTE on 18th August 2025.

FACULTY ACHIEVEMENTS

Research Publication

Dr. Santhosh Kumar G & Dr. U. Pavan Kumar has successfully presented the paper titled "Trustworthy AI-Powered Multimodal Biofeedback for Stress Management: An Explainable, Privacy-Preserving and Fairness-Aware Framework" at the 7th International Conference on Innovative Data Communication Technologies and Applications (ICIDCA 2025) organised by RVS College of Engineering and Technology, Coimbatore, India on 6th to 08th October 2025.

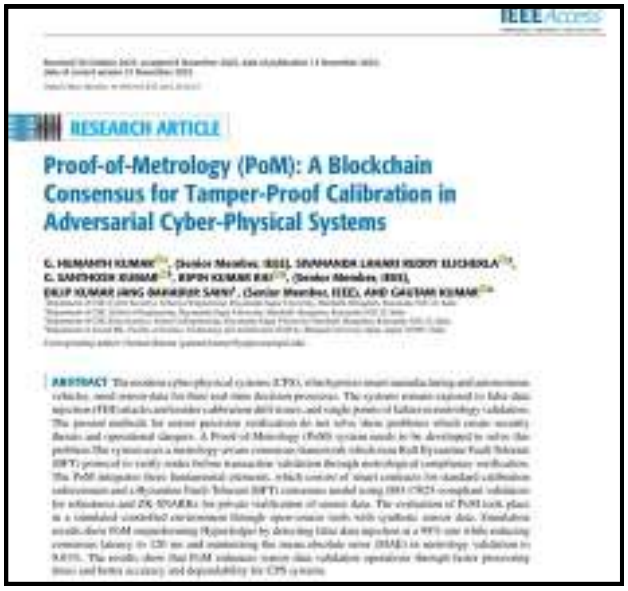
Dr. Shaila S G, Prof. Shivamma D & **Dr. Santhosh Kumar G** for presenting the research paper entitled "Pharmaceutical Quality Assurance via Transformer- Based Deep Learning Models for Automated Tablet Defect Detection" at The IEEE Technical sponsored 2nd International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF 2025) held at St. Joseph's Institute of Technology, Chennai on 09th & 10th October 2025.

Patents

Dr. Santhosh Kumar G, Dr. U. Pavan Kumar Prof. Godhandaraman T, Prof. Shivamma D & Dr. Shaila S G has published a patent title, Dynamic Energy Management System for Self-Powered IoT Devices using Intelligent Energy Harvesting on 26th September 2025 with Application No: 202541083566

FACULTY ACHIEVEMENTS

Dr. U. Pavan Kumar and Dr. Santhosh Kumar G have submitted an ANRF research proposal titled "AI-Driven Multimodal Intelligence for Scientific Discovery (AIMISD): A Federated Framework for Integrating Genomic, Epigenomic, and Clinical Data" for AI for Science and Science of AI(ANRF) with a proposed funding amount of Rs.74,12,840/-.



Dr. Santhosh Kumar G has published a Q1 research paper titled "Proof-of-Metrology (PoM): A Blockchain Consensus for Tamper-Proof Calibration in Adversarial Cyber-Physical Systems" in the IEEE Access journal, which has a high Impact Factor of 3.6.
DOI:
[https://ieeexplore.ieee.org/document/11244795]

Dr. Santhosh Kumar G published a research paper titled "Retrieval-Augmented Graph Neural Model for Medical Question Answering System" at the 5th International Conference on Evolutionary Computing and Mobile Sustainable Networks (ICECMSN 2025), organized by the Department of Information Technology, Hindusthan Institute of Technology, Coimbatore, India, held from 24th to 26th November 2025.

FACULTY ACHIEVEMENTS

Dr. Suresh Arumugam
Associate Professor
Department of CSE (Data Science)

Research Publication

- Sindhu and Suresh Arumugam, "Agent-Based Generative AI Model for Cost-Aware Automation in Machine Learning Pipelines," in IEEE Access, vol. 13, pp. 192189-192209, 2025, doi: 10.1109/ACCESS.2025.3635613.
- Suresh Arumugam, Sindhu A and S. M. N, "Web based Real Time Detection of Compound Facial Emotions with Deep Learning," 2025 7th International Conference on Innovative Data Communication Technologies and Application (ICIDCA), Coimbatore, India, 2025, pp. 242-247, doi: 10.1109/ICIDCA66325.2025.11280329
- V. N. Reddy K, J. Jomy, S. Rose, K. Vasan, Sindhu A and Suresh Arumugam, "Semantic Information Retrieval using Transformer-based Embeddings and Vector Similarity Search," 2025 7th International Conference on Innovative Data Communication Technologies and Application (ICIDCA), Coimbatore, India, 2025, pp. 1031-1037, doi: 10.1109/ICIDCA66325.2025.11280585.
- Kanagaraj, Suresh Arumugam and Sindhu A "Cloud-Based Deep Learning for Pneumonia Detection: A Comprehensive Overview," 2025 3rd International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA), Coimbatore, India, 2025, pp. 1-7, doi: 10.1109/ICAECA63854.2025.11012567.
- Sindhu A, Suresh Arumugam, et al, "Visual Simultaneous Localisation and Mapping (VSLAM) for Unstructured Environment," 2025 3rd International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA), Coimbatore, India, 2025, pp. 1-4, doi: 10.1109/ICAECA63854.2025.11012543.
- Sindhu A, Suresh Arumugam, Shaila S G et al, "Personalized Skincare Recommender System Using Deep Learning," 2025 3rd International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA), Coimbatore, India, 2025, pp. 1-6, doi: 10.1109/ICAECA63854.2025.11012227.
- A. Tomar, V. Kumar, S. Zaid, S. Waseem, Sindhu A and Suresh Arumugam, "Emotional Support System for Mental Health and Personalized Recommendation," 2025 Third International Conference on Networks, Multimedia and Information Technology (NMITCON), BENGALURU, India, 2025, pp. 1-7, doi: 10.1109/NMITCON65824.2025.11188312.

FACULTY ACHIEVEMENTS

Patents

- Dr. Suresh Arumugam, Sindhu A has Published a patent Title “A SYSTEM AND METHOD FOR CONTEXT-AWARE SENTIMENT ANALYSIS USING HIERARCHICAL LONG SHORT-TERM MEMORY (LSTM) NETWORKS” on date 5th Sep 2025 with Application no:202541074679.
- Dr. Suresh Arumugam, Sindhu A has Published a patent Title ,”AUTOMATED MACHINE LEARNING SYSTEM FOR GENERATING PREDICTIVE MODELS TAILORED TO INDUSTRY-SPECIFIC OPTIMIZATION” on date 5th Sep 2025 with Application no: 202541080192.
- Dr. Suresh Arumugam, Sindhu A has Published a patent Title “A SYSTEM AND METHOD FOR AUTOMATED FEATURE SELECTION AND DYNAMIC WEIGHT ADJUSTMENT USING REINFORCEMENT LEARNING” on date 28th Nov 2025 with Application no: 202541111102.
- Dr. Suresh Arumugam, Sindhu A has Published a patent Title “SELF-HEALING MACHINE LEARNING ARCHITECTURE FOR FAULT-TOLERANT EDGE COMPUTING DEVICES” on date 28th Nov 2025 with Application no: 202541111100.

Dr. Suresh Arumugam as Reviewer for the 11th International conference on Electronics, Computing and Communication Technologies, IEEE CONNECT (July 10-13, 2025) organized by IEEE Bangalore Section at Sterling’s Mac Hotel, Bangalore.

Dr. Suresh A for organizing & participating in the Five Days Faculty Development Program on “DevOps & MLOps” held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University

Dr Suresh A certified as an Oracle Cloud Infrastructure Data Science Professional upon successfully completing the global certification course offered by Oracle.

FACULTY ACHIEVEMENTS

Dr. Suresh A & Prof. Sindhu A has successfully presented the paper titled "Web-based Real-Time Detection of Compound Facial Emotions with Deep Learning" at the 7th International Conference on Innovative Data Communication Technologies and Applications (ICIDCA 2025) organised by RVS College of Engineering and Technology, Coimbatore, India on 6th to 08th October 2025.

Dr. Suresh A. received a voucher receipt notification from CMC – Computers, Materials & Continua in recognition of his contribution to the peer-review process. A $50 coupon was awarded as appreciation for his valuable support to the journal's reviewing activities. The voucher is issued by Tech Science Press and is valid until 24 November 2025.

FACULTY ACHIEVEMENTS

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

Research Publication

- Kumar, G. Hemanth, Sivananda Reddy, Sugandha Saxena, K. Ayyappa Swamy, and **U. Pavan Kumar.** "FL-DPCSA: Federated learning with differential privacy for cache side-channel attack detection in edge-based smart grids." e-Prime-Advances in Electrical Engineering, Electronics and Energy (2025): 101057.
- S.G. Shaila & **Kumar, U. Pavan** & Sg, Sumana. (2025). Speech Audio Analytics based Classification of Human Emotions using Machine Learning and Deep Learning Models. 10.1109/NGISE64126.2025.11085224.
- G. H. Kumar, D. R. K. Raja, **U. P. Kumar**, C. R. Murthy, K. N. Vidyasagar and V. Eswari, "Privacy-Preserving Federated Learning for Equipment Failure Detection in Smart Manufacturing," 2025 7th International Conference on Intelligent Sustainable Systems (ICISS), India, 2025, pp. 755-761, doi: 10.1109/ICISS63372.2025.11076327.

Dr. Santhosh Kumar G, Dr. U. Pavan Kumar Prof. Godhandaraman T, Prof. Shivamma D & Dr. Shaila S G has published a patent title, Dynamic Energy Management System for Self-Powered IoT Devices using Intelligent Energy Harvesting on 26th September 2025 with Application No: 202541083566

FACULTY ACHIEVEMENTS

Dr. U. Pavan Kumar for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University

Dr. U. Pavan Kumar has actively participated in the Faculty Development Program titled "Nurturing Emotional Intelligence: A Journey from Self-Awareness to Conscious Parenting" held on 8th July 2025.

Dr. U. Pavan Kumar published a Q1 Journal title "FL-DPCSA: Federated learning with differential privacy for cache side-channel attack detection in edge-based smart grids" in e-Prime - Advances in Electrical Engineering, Electronics and Energy. July 2025

Dr. U. Pavan Kumar has successfully completing of a Six Day Faculty Development Program on Prompt Engineering and ChatGPT Utilization" organized by The Department of Information Technology in association with Techno Future India held from July 14th to 19th July 2025.

FACULTY ACHIEVEMENTS

Dr. U. Pavan Kumar as Reviewer for the 11th International conference on Electronics, Computing and Communication Technologies, IEEE CONNECT (July 10-13, 2025) organized by IEEE Bangalore Section at Sterling's Mac Hotel, Bangalore.

Dr. U. Pavan Kumar as Reviewer for the 03rd IEEE International Conferences on Network, Multimedia, and Information Technology (NMITCON) 2025 organized Nitte Meenakshi Institute of Technology, Bengaluru held on 01st & 02nd August 2025 by IEEE Bangalore Section.

Dr. U. Pavan Kumar has successfully completed the 2-Weeks online FDP on Artificial Intelligence organized by SkillDzire in collaboration with AICTE on 18th August 2025.

Dr. U. Pavan Kumar has actively participated in the One Week Online Faculty Development Programme (FDP) on "Exploring Generative AI: Foundations, Models, and Real-World Applications in Vision and Language" organized by Department of Computer Science & Engineering (AI & ML), LBRCE from 25th to 30th August 2025

FACULTY ACHIEVEMENTS

Dr. U. Pavan Kumar received a Certificate of Appreciation for serving as a Reviewer for the International Conference on Intelligent Communication Networks and Computational Techniques (ICICNCT-2025), organized by Guru Nanak Dev Engineering College, Bidar during 4th to 6th September 2025

Dr. Santhosh Kumar G & Dr. U. Pavan Kumar has successfully presented the paper titled "Trustworthy AI-Powered Multimodal Biofeedback for Stress Management: An Explainable, Privacy-Preserving and Fairness- Aware Framework" at the 7th International Conference on Innovative Data Communication Technologies and Applications (ICIDCA 2025) organised by RVS College of Engineering and Technology, Coimbatore, India on 6th to 08th October 2025.

Dr. U. Pavan Kumar act as Reviewer for 2nd International Conference on Software, Systems and Information Technology (SSITCON-2025) Organized by Department of CSE(Cyber Security) in association with CSE, Sri Siddhartha Institute of Technology (SSIT), Tumkur Karnataka on 17th-18th October 2025.

Dr. U. Pavan Kumar act as Reviewer for International Conference on Communication, Computer and Information Technology (IC3IT-2025) Organized at Mysuru Royal Institute of Technology, Mandya, India on 24th & 25th October 2025.

FACULTY ACHIEVEMENTS

Dr. U Pavan Kumar served as a Review Committee Member for ACDSA 2026, the International Conference on Artificial Intelligence, Computer, Data Sciences, and Applications on 19 November 2025 by the Conference Chair, Josephine Bernadette Benjamin.

Dr. U. Pavan Kumar and Dr. Santhosh Kumar G have submitted an ANRF research proposal titled "AI-Driven Multimodal Intelligence for Scientific Discovery (AIMISD): A Federated Framework for Integrating Genomic, Epigenomic, and Clinical Data," which has been accepted for technical evaluation under the AI for Science and Science of AI (ANRF) scheme, with a proposed funding of ₹74,12,840

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Dr. U. Pavan Kumar act as Reviewer for International Conference on Communication, Computer and Information Technology (IC3IT-2025) Organized at Mysuru Royal Institute of Technology, Mandya, India on 24th & 25th October 2025.

FACULTY ACHIEVEMENTS

Dr. U. Pavan Kumar is a contributing author of a research paper presented at ICTCS 2025. The paper, titled “An Adaptive Machine Learning Framework for Detection and Mitigation of Rogue Access Points (RAPs) in WLAN,” was showcased at the 10th International Conference on Information and Communication Technology for Competitive Strategies. The conference was conducted from 15–17 December 2025 and hosted digitally from Jaipur, India.

Dr. Santhosh Kumar G and Dr. U. Pavan Kumar has published a paper titled “Trustworthy AI-Powered Multimodal Biofeedback for Stress Management: An Explainable, Privacy Preserving, and Fairness-Aware Framework”, in 2025 7th International Conference on Innovative Data Communication Technologies and Application (ICIDCA) December 2025

Dr. U. Pavan Kumar has successfully participated in the five-day online Faculty Development program on “.Net Core with Angular Technology” Organized with CSE (Data Science) from 22-12-2025 to 26-12-2025

FACULTY ACHIEVEMENTS

Dr. Dr. Jobin Thomas
Assistant Professor
Department of CSE (Data Science)

Dr. Jobin Thomas has successfully completing the NPTEL Online Certification course on Python for Data Science with a consolidated score of 77% under Indian Institute of Technology Madras during Jul-Aug 2025.

FACULTY ACHIEVEMENTS

Prof. Shivamma D
Assistant Professor
Department of CSE (Data Science)

Research Publication

- N. R, M. K. M. R, K. C, G. F. I, **Shivamma D** and D. George, "Automated Wireless Charging System for Electric Vehicles Using Cloud Control," 2025 International Conference on Recent Innovation in Science Engineering and Technology (ICRISET), CHENNAI, India, 2025, pp. 1-5, doi: 10.1109/ICRISET64803.2025.11252334.
- **D, Shivamma** and Aurobind. G. "Brain Tumor Detection from MRI Scans Using Deep Residual Learning and Morphological Segmentation." 2025 International Conference on Intelligent Communication Networks and Computational Techniques (ICICNCT) (2025): 01-07.
- P. SN, N. Shelke, D. K. J. B. Saini, A. Pimpalkar, G. H. Kumar and **Shivamma D**, "AI-Powered Defense Against Advanced Persistent Threats (APTs): Techniques, Case Studies, and Future Research Directions," 2025 3rd International Conference on Sustainable Computing and Data Communication Systems (ICSCDS), Erode, India, 2025, pp. 826-831, doi: 10.1109/ICSCDS65426.2025.11166697.
- **Shivamma. D** and Shaila. S. G, "Deep Learning Based Analysis for Facial Expression Recognition of Simple and Complex Emotions in Healthcare," 2025 IEEE International Conference for Women in Innovation, Technology & Entrepreneurship (ICWITE), Bangalore, India, 2025, pp. 1-6, doi: 10.1109/ICWITE64848.2025.11307127.

Patents

- Dr. Santhosh Kumar G, Dr. U. Pavan Kumar Prof. Godhandaraman T, **Prof. Shivamma D** & Dr. Shaila S G has published a patent title, Dynamic Energy Management System for Self-Powered IoT Devices using Intelligent Energy Harvesting on 26th September 2025 with Application No: 202541083566
- MedConnect: An AI-Powered, Blockchain-Enabled Medical Chatbot for Accessible Healthcare

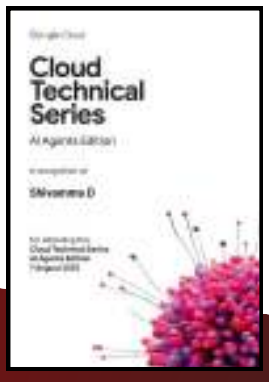
FACULTY ACHIEVEMENTS

Prof. Shivamma D for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Shivamma D has awarded a certificate for AWS SUMMIT India Online on 26th June 2025

Prof. Shivamma D has presented the research paper entitled Automated wireless charging System for Electric Vehicles using Cloud Control at 1st IEEE International Conference on Recent Innovation in Science Engineering and Technology (ICRISET 2025) held on 1st & 2nd August 2025.

Prof. Shivamma D as Reviewer for the 03rd IEEE International Conferences on Network, Multimedia, and Information Technology (NMITCON) 2025 organized Nitte Meenakshi Institute of Technology, Bengaluru held on 01st & 02nd August 2025 by IEEE Bangalore Section.



Prof. Shivamma D has attended the Cloud Technical Series AI Agents Edition Organized by Google Cloud on 7th August 2025.

FACULTY ACHIEVEMENTS

Prof. Shivamma D published a conference paper titled "Turkish Raisin Classification Through Deep Learning Prediction Models" in Lecture Notes in Networks and Systems series and part of the Data Mining and Information Security proceedings, Springer 2025.

Prof. Shivamma D received a Certificate of Appreciation for presenting a research paper "Brain Tumor Detection from MRI Scans Using Deep Residual Learning and Morphological Segmentation" at the International Conference on Intelligent Communication Networks and Computational Techniques (ICICNCT-2025). The conference was organized by the Department of Electronics and Communication Engineering, Guru Nanak Dev Engineering College, Bidar, from 4th to 6th September 2025.

Prof. Shivamma D has successfully participated & completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on "Advances in Deep Learning for Medical Imaging and Disease Diagnosis (DL-MIDD 2025)" at Sambalpur University Institute of information Technology from 14-09-25 to 19-09-25.

Prof. Shivamma D has participated & presented the paper titled "Deep Learning based analysis for facial expression recognition of simple & complex emotions in Healthcare" in the 3rd IEEE Conference for Women in Innovation, Technology and Entrepreneurship (ICWITE 2025) on 26-27 Sep 2025 organized by IEEE Women in Engineering Affinity Group Bangalore Section at B.G.S College of Engineering, Bangalore.

FACULTY ACHIEVEMENTS

Dr. Shaila S G, Prof. Shivamma D & Dr. Santhosh Kumar G for presenting the research paper entitled “Pharmaceutical Quality Assurance via Transformer- Based Deep Learning Models for Automated Tablet Defect Detection” at The IEEE Technical sponsored 2nd International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF 2025) held at St. Joseph’s Institute of Technology, Chennai on 09th & 10th October 2025.

Prof. Monish L, Prof. Shivamma D, Prof. Manjula M & Prof. Sindhu A Published paper titled "Optimizing Forensic DNA Profiling: A Novel Classifier Approach" In: Sharma, H., Shrivastava, V., Tripathi, A.K., Wang, L. (eds) Communication and Intelligent Systems. ICCIS 2024. Lecture Notes in Networks and Systems, vol 1371. Springer, Singapore.

Prof. Shivamma D has actively participated & completed One Week Faculty Development Program on “Recent Advancements in Artificial Intelligence (AI) & ML” from 30th June to 04th July 2025. Organized by Department of ECE St. Joseph’s College of Engineering in association with STEP-National Institute of Technology, Surathkal and Pantech e Learning.

FACULTY ACHIEVEMENTS

Shivamma D. successfully completed Module 1: Orientation towards Technical Education and Curriculum Aspects under the National Initiative for Technical Teachers Training (NITTT), organized by AICTE through SWAYAM, in September 2025.

Prof. Shivamma D, Assistant Professor, Department of CSE (Data Science), School of Engineering, Dayananda Sagar University, was invited as a Resource Person to deliver a session on “Empowering Intelligence with Data Science and Machine Learning” on 15th November 2025 during the Induction Program 2025 at Dayananda Sagar College of Arts, Science & Commerce. She engaged MCA students with real-world applications, emerging trends, and career opportunities in AI and ML, making the session highly insightful and inspiring.

FACULTY ACHIEVEMENTS

Prof. Monish L
Assistant Professor
Department of CSE (Data Science)

Research Publication

- **Prof. Monish L**, and Dr. S. G. Shaila, "A Hybrid Fuzzy CNN–LSTM Approach for Emotion Recognition from EEG–ECG Physiological Signals", Eng. Technol. Appl. Sci. Res., vol. 15, no. 6, pp. 30405–30411, Dec. 2025.
- **Monish, L**., Shaila, S.G. (2026). Electrocardiogram Signal-Based Analysis and Prediction of Emotions Using Deep Networks. In: Nanda, S.J., Mittal, H., Lim, MH. (eds) Proceedings of International Conference on Paradigms of Communication, Computing and Data Analytics. PCCDA 2025 2025. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-96-6843-4_18
- P. S. N, N. Shelke, D. K. Jang Bahadur Saini, A. Pimpalkar, G. H. Kumar and **Monish L,** "Blockchain-Enabled Federated Learning for Privacy-Preserving AI," 2025 9th International Conference on Inventive Systems and Control (ICISC), Coimbatore, India, 2025, pp. 1536-1543, doi: 10.1109/ICISC65841.2025.11187566.
- Rekha R Nair, Tina Babu, S.G. Sumana, **L. Monish** published Data-driven optimization for cafe revenue enhancement: A comprehensive analysis and strategy development

Patents

- AI BASED NETWORK THREAT DETECTING DEVICE
- AI-Enabled Automated Curriculum Optimization System for Sustainable Educational Development

FACULTY ACHIEVEMENTS

Prof. Monish L for organizing & participating in the Five Days Faculty Development Program on **"DevOps & MLOps"** held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Monish L, Prof. Shivamma D, Prof. Manjula M & Prof. Sindhu A Published paper titled "Optimizing Forensic DNA Profiling: A Novel Classifier Approach" In: Sharma, H., Shrivastava, V., Tripathi, A.K., Wang, L. (eds) Communication and Intelligent Systems. ICCIS 2024. Lecture Notes in Networks and Systems, vol 1371. Springer, Singapore.

Prof. Monish L & Dr. Shaila S G has participated & presented the paper titled "Mpox Risk Forecasting: Integrating Neural Networks and Public Sentiment Analysis" in the 3rd IEEE Conference for Women in Innovation, Technology and Entrepreneurship (ICWITE 2025) on 26-27 Sep 2025 organized by IEEE Women in Engineering Affinity Group Bangalore Section at B.G.S College of Engineering, Bangalore.

Dr. Shaila S. G, Prof. Monish L and Prof. Manjula M presented a research paper titled "Neuro-Acoustic Approach to Emotion Recognition Using EEG and Audio Signals." The conference was organized in association with reputed academic and research organizations and publishers. A Certificate of Appreciation was awarded at the 6th International Conference on Data Engineering and Communication Technology (ICDECT-2025) held on 1st–2nd December 2025 at Bhubaneswar Engineering College, Bhubaneswar.

FACULTY ACHIEVEMENTS

Prof. Manjula M
Assistant Professor
Department of CSE (Data Science)

Research Publication

- Tina Babu1 , Rekha R Nair, **Manjula M** , Manjula V, and Chaithra Shree P published Integrating IoT and Sensors for Comprehensive Road Safety: A Systematic Approach to Accident Prevention
- Tina Babu, Rekha R. Nair, **M. Manjula**, Utso Bhattacharyya published Effective placement prediction for educational institutions: Insights from machine learning

Prof. Manjula M for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Manjula M has presented the paper titled Multimodal Machine Learning Approach for Early Detection and Classification of Breast Cancer using Imaging and Genomic Data in International Conference on Biomedical Engineering and Sustainable Healthcare Organized by Department of Biomedical Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal August 08 - 09, 2025.

FACULTY ACHIEVEMENTS

Prof. Manjula M has participated & presented the paper titled “Adaptive Audio Steganography using Syndrome-Trellis Codes (STC) and GOAS” in the 3rd IEEE Conference for Women in Innovation, Technology and Entrepreneurship (ICWITE 2025) on 26-27 Sep 2025 organized by IEEE Women in Engineering Affinity Group Bangalore Section at B.G.S College of Engineering, Bangalore.

Prof. Manjula M has presented the paper titled Multimodal Machine Learning Approach for Early Detection and Classification of Breast Cancer using Imaging and Genomic Data in International Conference on Biomedical Engineering and Sustainable Healthcare Organized by Department of Biomedical Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal August 08 - 09, 2025.

Prof. Monish L, Prof. Shivamma D, Prof. Manjula M & Prof. Sindhu A Published paper titled "Optimizing Forensic DNA Profiling: A Novel Classifier Approach" In: Sharma, H., Shrivastava, V., Tripathi, A.K., Wang, L. (eds) Communication and Intelligent Systems. ICCIS 2024. Lecture Notes in Networks and Systems, vol 1371. Springer, Singapore.

FACULTY ACHIEVEMENTS

Prof. Sindhu A
Assistant Professor
Department of CSE (Data Science)

Research Publication

- **A Sindhu**, S Arumugam, published "Agent-Based Generative AI Model for Cost-Aware Automation in Machine Learning Pipelines," 2025, IEEE Access 13, 192189 - 192209
- A. Tomar, V. Kumar, S. Zaid, S. Waseem, **Sindhu A** and S. A, "Emotional Support System for Mental Health and Personalized Recommendation," 2025 Third International Conference on Networks, Multimedia and Information Technology (NMITCON), BENGALURU, India, 2025, pp. 1-7, doi: 10.1109/NMITCON65824.2025.11188312. keywords: {Emotion recognition;Translation;Mental health;Medical services;Predictive models;Market research;Real-time systems;Multilingual;Long short term memory;Monitoring;Natural language processing (NLP);machine learning (ML);emotion detection;multilingual text classification;BERT;LSTM;affective computing;real-time sentiment analysis;mental health support;Flask web application},
- **Prof. Sindhu A** & Dr. Suresh Published a paper titled “Emotional Support System for Mental Health and Personalized Recommendation” at the IEEE 2025 Third International Conference on Networks, Multimedia and Information Technology (NMITCON 2025) held in Bengaluru, India.

Patents

- Dr. Suresh Arumugam, Sindhu A has Published a patent Title “A SYSTEM AND METHOD FOR CONTEXT-AWARE SENTIMENT ANALYSIS USING HIERARCHICAL LONG SHORT-TERM MEMORY (LSTM) NETWORKS” on date 5th Sep 2025 with Application no:202541074679.
- Dr. Suresh Arumugam, Sindhu A has Published a patent Title ,”AUTOMATED MACHINE LEARNING SYSTEM FOR GENERATING PREDICTIVE MODELS TAILORED TO INDUSTRY-SPECIFIC OPTIMIZATION” on date 5th Sep 2025 with Application no: 202541080192.

Prof. Sindhu A for organizing & participating in the Five Days Faculty Development Program on “DevOps & MLOps” held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Sindhu A certified as an Oracle Cloud Infrastructure Data Science Professional upon successfully completing the global certification course offered by Oracle

FACULTY ACHIEVEMENTS

Dr. Suresh A & Prof. Sindhu A has successfully presented the paper titled "Semantic Information Retrieval using Transformer-based Embeddings and Vector Similarity Search" at the 7th International Conference on Innovative Data Communication Technologies and Applications (ICIDCA 2025) organised by RVS College of Engineering and Technology, Coimbatore, India on 6th to 08th October 2025.

Dr. Suresh A & Prof. Sindhu A has successfully presented the paper titled "Web-based Real-Time Detection of Compound Facial Emotions with Deep Learning" at the 7th International Conference on Innovative Data Communication Technologies and Applications (ICIDCA 2025) organised by RVS College of Engineering and Technology, Coimbatore, India on 6th to 08th October 2025.

Prof. Sindhu A presented the paper titled "AvianTrack: Real-Time Bird Species Detection and Classification in Streaming Video via YOLOv8" at International Conference on Artificial Intelligence and Networking (ICAIN-2025) organized jointly by BITS Pilani, Dubai Campus, UAE in association with the Indian Institute of Information Technology, Allahabad, India & Universal Inovators, Delhi, India on 6th - 7th October 2025.

Prof. Monish L, Prof. Shivamma D, Prof. Manjula M & Prof. Sindhu A Published paper titled "Optimizing Forensic DNA Profiling: A Novel Classifier Approach" In: Sharma, H., Shrivastava, V., Tripathi, A.K., Wang, L. (eds) Communication and Intelligent Systems. ICCIS 2024. Lecture Notes in Networks and Systems, vol 1371. Springer, Singapore.

FACULTY ACHIEVEMENTS

Sindhu. A (Asst Prof, CSE -Data Science Dept.) and Dr. Suresh Arumugam has published a patent titled “A System And Method For Context-aware Sentiment Analysis Using Hierarchical Long Short-term Memory (Lstm) Networks” Application no:202541074679 on 5/09/2025

Sindhu. A (Asst Prof, CSE -Data Science Dept.) and Dr. Suresh Arumugam has published a patent titled “Automated Machine Learning System For Generating Predictive Models Tailored To Industry-Specific Optimization” Application no: 202541080192 on 5/09/2025.

Prof. Sindhu has successfully completed a Faculty Development Program on Modern Web Development & AI Integration under the Next Gen Employability Program during 10th November to 14th November 2025.

Sindhu. A (Asst Prof, CSE -Data Science Dept.) and Dr. Suresh Arumugam has published a paper titled "Agent-Based Generative AI Model for Cost-Aware Automation in Machine Learning Pipelines” in the journal “ IEEE Access ” that has a high Impact Factor of 3.6 & Country Rank (SJR) of Q1.
Journal Digital Object Identifier: 10.1109/ACCESS.2025.3635613

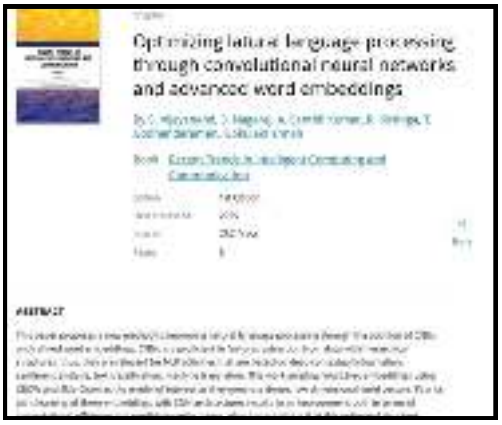
FACULTY ACHIEVEMENTS

Prof. Godhandaraman T
Assistant Professor
Department of CSE (Data Science)

Research Publication

Prof. Godhandaraman T published a Q2 Journal title Blockchain-Enabled Medical Waste Management System for Enhanced Traceability, Safety and Environmental Protection in the International Journal of Advances in Soft Computing and its Applications. July 2025.

Prof. Godhandaraman T has Published a book chapter title "Optimizing Natural language Processing through Convolutional Neural Networks and advanced word embeddings" at Recent Trends in Intelligent Computing and Communication on 30th September 2025 by CRC Press London.



Patents

- Dr. Santhosh Kumar G, Dr. U. Pavan Kumar **Prof. Godhandaraman T,** Prof. Shivamma D & Dr. Shaila S G has published a patent title, Dynamic Energy Management System for Self-Powered IoT Devices using Intelligent Energy Harvesting on 26th September 2025 with Application No: 202541083566

FACULTY ACHIEVEMENTS

Prof. Godhandaraman T for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Godhandaraman T has successfully participated & completed AICTE Training And Learning (ATAL) Academy FDP on Recent Advances in IOT and AI for a smarter Future for Revolutionizing Society at Academy of maritime Education and Training deemed to be University from 13-10-2025 to 18-10-2025.

Prof. Godhandaraman T has successfully presented a research paper titled "Federated Learning in Agriculture: Current Advances, Open Challenges, and Future Horizons." and "Federated Digital Twin and Blockchain Framework for Lunar/Deep-Space Waste-to-Resource Circularity, the conference was organized by the Department of Computer Science and Engineering, Nandha-Engineering-College, Erode. The event was held from December 1–3, 2025, bringing together researchers and experts in next-generation networks and cybernetics. A Certificate of Presentation was awarded at the IEEE-sponsored International Conference on NexGen Networks and Cybernetics (IC2NC 2025)

FACULTY ACHIEVEMENTS

Prof. Chandrakala L
Assistant Professor
Department of CSE (Data Science)

Prof. Chandrakala L for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Prapti Bhattacharjee
Assistant Professor
Department of CSE (Data Science)

Prof. Prapti Bhattacharjee for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

FACULTY ACHIEVEMENTS

Prof. Mithun Kumar
Assistant Professor
Department of CSE (Data Science)

Prof. Mithun Kumar for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Mithun Kumar has actively participated in a two - weeks Online Joint Faculty Development Programme on "AI for Teaching and Learning" jointly organised by Electronics and ICT Academies held from 18 to 29 August, 2025 under the "Scheme of financial assistance for setting up of Electronics and ICT Academies" of the Ministry of Electronics and Information Technology (MeitY), Government of India

Prof. Mithun Kumar for presenting the research paper entitled "Carbon-Aware AI Workload Scheduling with Renewable Energy Sources" at The IEEE Technical sponsored 2nd International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF 2025) held at St. Joseph's Institute of Technology, Chennai on 09th & 10th October 2025.

FACULTY ACHIEVEMENTS

Prof. Megha Chandel
Assistant Professor
Department of CSE (Data Science)

Prof. Megha Chandel for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Megha Chandel has actively participated in the Faculty Development Program titled "Nurturing Emotional Intelligence: A Journey from Self-Awareness to Conscious Parenting" held on 8th July 2025.

FACULTY ACHIEVEMENTS

Prof. Kishor Malakar
Assistant Professor
Department of CSE (Data Science)

Prof. Kishor Malakar for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Kishor Malakar has actively participated in the Faculty Development Program titled "Nurturing Emotional Intelligence: A Journey from Self-Awareness to Conscious Parenting" held on 8th July 2025.

FACULTY ACHIEVEMENTS

Prof. Souramita Bhowmik
Assistant Professor
Department of CSE (Data Science)

Prof. Souramita Bhowmik for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.

Prof. Souramita Bhowmik has actively participated in the Faculty Development Program titled "Nurturing Emotional Intelligence: A Journey from Self-Awareness to Conscious Parenting" held on 8th July 2025.

Prof. Souramita Bhowmik has actively participated in the 5 Day Hands on Faculty Development Program on "Entangle 25: A Hands-on workshop on Quantum Computing and its Emerging Paradigms" Organized by the Department of Computer Science & Technology, Dayananda Sagar University, held from 06th to 10th August 2025.

FACULTY ACHIEVEMENTS

Prof. Souramita Bhowmik has actively participated in a two - weeks Online Joint Faculty Development Programme on “AI for Teaching and Learning” jointly organized by Electronics and ICT Academy, IIT Guwahati. held from 18 to 29 August, 2025 under the “Scheme of financial assistance for setting up of Electronics and ICT Academies” of the Ministry of Electronics and Information Technology (MeitY), Government of India

Prof. Souramita Bhowmik for extending her support to PyNet Labs Private Limited for organising one day workshop on Networking Fundamentals on 7th October 2025 held at Shri Khushal Das University conducted by Pynet Labs.

FACULTY ACHIEVEMENTS

Prof. Shashank Shekhar
Assistant Professor
Department of CSE (Data Science)

Prof. Shashank Shekhar for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.


Dayananda Sagar University
School of Engineering
Department of CSE (Data Science)


6th International Conference on
Data Engineering and Communication Technology

Dr. Shaila S. G, Prof. Shashank Shekar presented a research paper titled "A Robust Video Steganography Framework with a Decoy Extraction Mechanism for Enhanced Security". The conference was organized in association with reputed academic and research organizations and publishers. A Certificate of Appreciation was awarded at the 6th International Conference on Data Engineering and Communication Technology (ICDECT-2025) held on 1st–2nd December 2025 at Bhubaneswar Engineering College, Bhubaneswar.

FACULTY ACHIEVEMENTS

Prof. Mriganka Das
Assistant Professor
Department of CSE (Data Science)

Prof. Mriganka Das for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.


Dayananda Sagar University
School of Engineering
Department of CSE (Data Science)

Prof. Snigdha Sikha Kashyap
Assistant Professor
Department of CSE (Data Science)

Prof. Snigdha Sikha for organizing & participating in the Five Days Faculty Development Program on "DevOps & MLOps" held from 30th June 2025 to 04th July 2025 organized by Department of CSE(Data Science), School of Engineering, Dayananda Sagar University.


Dayananda Sagar University
School of Engineering
Department of CSE (Data Science)

STUDENT ACHIEVEMENTS

Shashi Kumar C - ENG23DS0034 has participated in the Micropython for Beginners course organized by National Institute of Electronics & Information Technology, Calicut from 25th June to 29th June 2025.

Shashi Kumar C - ENG23DS0034 has attended the Bootcamp on "Fundamentals of Drone Systems and AI/ML for Drone Vision" funded by Meity, Govt. of India under the project "Capacity Building for Human Resource Development in Unmanned Aircraft Systems (Drones and related Technology)" Conducted by the Centre for Drone Application, IIT Goa from 30th June to 04th July 2025"

Shashi Kumar C - ENG23DS0034 have visited to OLA GIGA FACTORY Pochampalli, Tamil Nadu on 15th August 2025 for the study of new Bharath cell (4680) cells designed and made in India for EV's simultaneously taken part in ola Sankalp event 2025 launch of ola super bikes and the Bhavesh Aggarwal CEO of ola introduced about rare earth metal ferrite motors which will be used in their upcoming ola scooty and super bikes.

Venkat Nivas Reddy - ENG22DS0022 was part of a 31-member DSU MUN delegation that represented SOE-DSU at MAHE MUN 2025 in Udupi from 15th to 17th August, where 4 delegates from the team received special recognition.

STUDENT ACHIEVEMENTS

Shashi Kumar C - ENG23DS0034 has successfully completed the Professional Drone Course conducted during 24th & 25th September 2025 in ARTPARK, IISc, Bengaluru.

Sagar M(Eng23DS0029), Manjunath M Soudi (Eng23DS0019), Rathan deep C S(Eng23DS0027) were secured First Prize in AI in Agriculture domain in UDAYA 1.0 Intra -DSI hackathon held on 27th September 2025 at Dayananda Sagar College of Engineering, Bengaluru.

Vinith K M - ENG22DS0023 has been officially selected for the "Hubballi Poetry Festival 2025" endorsed by Indian Poetry Society curated & Cultured by ROSTRUM Diaries.

Aditya S -ENG23DS0001 has won 1st Place in Quizathon at the IEEE CIS & RAS SBC DSU- Technical Quizathon & Project Conclave 2025, organized by Department of CSE (AI & ML), Dayananda Sagar University held on 13th October 2025

STUDENT ACHIEVEMENTS

Shashi Kumar C - ENG23DS0034 has won 2nd Place in Quizathon at the IEEE CIS & RAS SBC DSU- Technical Quizathon & Project Conclave 2025, organized by Department of CSE (AI & ML), Dayananda Sagar University held on 13th October 2025.

Rathandeep C. S - ENG23DS0027 has emerged as the RUNNER UP of TechFusion 2025, organized by the Department of Computer Science and Engineering in IoT, Cybersecurity including Blockchain Technology at Dayananda Sagar Academy of Technology and Management, Bengaluru, held from October 13-15, 2025.

The team "Syntax_Breakers", led by Liketh B- ENG24DS0181 (CSE – Data Science), along with Pallavi B (Computer Science and Technology) and Akshay J K (CSE – Cyber Security), emerged as First Place winners in the IoT Domain at the Hackverse 2025 Hackathon, securing a cash prize for their innovative project titled "SwIoT". The 24-hour Hackathon – Hackverse 2025 was part of the State-Level Inter-Collegiate Technical Fest organized by DSATM, attracting over 170 teams and 700 participants from various institutions across the state. Students from the School of Engineering (SOE), DSU, showcased exceptional technical skills and creativity throughout the event. The winning project, SwIoT, is a smart waste management solution that integrates technology and sustainability through: Automated waste segregation rewarding users with redeemable points for responsible disposal. An integrated web platform that monitors bin fullness and notifies municipal authorities in real time. An air pollution and odour control system using charcoal and Carbon-14 filters with vacuum technology. A revenue generation model featuring advertisement space integration.

STUDENT ACHIEVEMENTS

Aditya S -ENG23DS0001 for Securing the First Place in Promptathon 2025 organized by CSE(AI&ML) & DSU X TEMPETE CLUB.

Adhitya.N-ENG23DS0049, Meghana.N-ENG23DS0073, Shivamurthy.B-ENG23DS0036, Sagar M-ENG23DS0029, Bhumika Moger- ENG23DS0009 has won the Global Nominee Award at the NASA International Space Apps Challenge 2025. Our project focused on the "Space Trash: Mars Recycling App" problem statement, where we designed a solution to manage and repurpose waste generated during long-duration Mars missions

Ameet Shankargouda Munavalli (ENG23DS0002), Vedeshwari Nakate (ENG23DS0075), Ayush Singh (ENG23DS0098)has been awarded the Oracle Certified Professional recognition for successfully achieving the Oracle Cloud Infrastructure 2025 Certified Data Science Professional credential. This certification, issued by Oracle University, acknowledges her expertise in data science concepts and their application using Oracle Cloud Infrastructure. The certification was awarded on October 24, 2025, and confirms her professional competency as recognized by Oracle Corporation. The eCertificate remains valid until October 24, 2027, reflecting continued relevance of the credential

STUDENT ACHIEVEMENTS

Shashi Kumar C (ENG23DS0034) and Kumari Nainshi (ENG23DS0016) from Data Science department have won a $100 Global Internship Voucher along with goodies from GeeksforGeeks at the international event Technogition '25, organized by the Department of Electronics and Communication Engineering, where they created the first Cognitive Digital Twins for predictive maintenance.

Shashi Kumar C (ENG23DS0034) served as a Core Volunteer at IEEE FNWF 2025 from November 10th to 12th, contributing to this premier forum on next-generation network technologies. The event convened global experts to explore advancements in 6G, AI-native networking, and digital inclusion. Over the three days, he supported the smooth delivery of high-profile keynotes, technical symposiums, and workshop sessions.

Vedeshwari Nakate (ENG23DS0075), Ayush Singh (ENG23DS0098), Ameet Shankargouda Munavalli (ENG23DS0002) has successfully earned the Microsoft Certified: Azure Data Fundamentals certification by meeting all the required assessment criteria. This certification validates foundational knowledge of core data concepts and Microsoft Azure data services. It was awarded on November 10, 2025, and is online verifiable, ensuring its authenticity. The achievement reflects proficiency in cloud-based data fundamentals aligned with Microsoft standards

STUDENT ACHIEVEMENTS

B TECH 2021-2025 BATCH

N ABHISHEK
ENG21DS0003
SILVER MEDAL

AKSHAYA B
ENG21DS0006
SILVER MEDAL

A ABHISHEK
ENG21DS0002
GOLD MEDAL

STUDENT PLACEMENTS

B TECH 2021-2025 BATCH

DSU B.TECH CSE (DS) - 2025 BATCH – TOP PLACEMENT DETAILS

SL NO	USN NO	FULL NAME	COMPANY	CTC
1	ENG21DS0002	A ABHISHEK	PEGASYSTEMS	18
2	ENG21DS0046	V NIVAS REDDY	PEGASYSTEMS	18
3	ENG21DS0026	PRANJAL MEWARA	SAKS INDIA	13.45
4	ENG21DS0021	MANOJ V BHANDARE	CYWARE LABS	12.26
5	ENG21DS0035	SAMMANA BHAVANI PRASAD	STONEX	10
6	ENG21DS0016	DESAI SREENIJA	EDUSTATION	9
7	ENG21DS0028	PRIYANKA P	HPE	8.5
8	ENG21DS0031	R PREM KUMAR REDDY	INRY	8.4
9	ENG21DS0020	GOLLA PUJARI SOWMYA	INFOGAIN	6.35
10	ENG21DS0012	BINDU. B	ROYAL CYBER	6
11	ENG21DS0003	N ABHISHEK	MUSIGMA	5
12	ENG21DS0047	VINUTH GOWDA S	KPMG GLOBAL SERVICES	5
13	ENG21DS0017	DIKESH REDDY S N	ENCORA	5
14	ENG21DS0023	NIKUNJ VIHARI KONAKALLA	ENCORA	5
15	ENG21DS0041	SRINIVAS K	CONSILIO INDIA	5

STUDENT ACHIEVEMENTS (PLACEMENTS)

TOP RECRUITER 2021-2025 BATCH

PLACEMENT DETAILS

BATCH	REGISTERED	ELIGIBLE	NON ELIGIBLE	HIGHER EDUCATION	TOTAL OFFERS
2021-2025	49	32	17	4	31

DREAM OFFERS

	REGULAR OFFER	DREAM OFFER	SUPER DREAM OFFER
BATCH	UPTO 5 LPA	5 LPA TO 10 LPA	10 TO 20 LPA
2021-2025	15	9	4

STUDENT PLACEMENTS

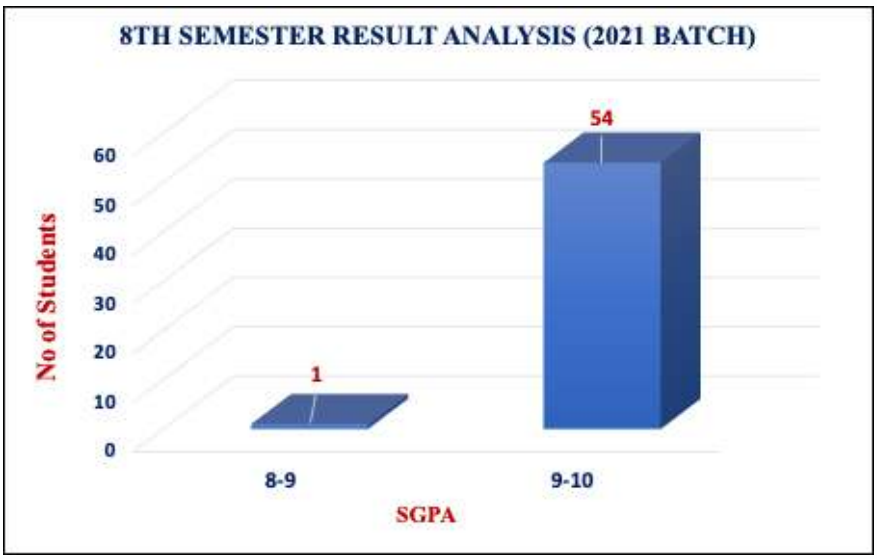
B TECH 2022-2026 BATCH

DSU B.TECH CSE (DS) - 2026 BATCH – TOP PLACEMENT DETAILS

SL NO	USN NO	FULL NAME	COMPANY	CTC
1	ENG22DS0017	Sanjana T	Ruckus CommScope	11
2	ENG22DS0015	SAHANA S M	Nokia	8.25
3	ENG22DS0004	JANARDHAN K S	MathCo	5.5
4	ENG22DS0022	VENKAT NIVAS REDDY K	MathCo	5.5
5	ENG22DS0026	ANSHUMAN	Solutionec Private Ltd	5
6	ENG22DS0029	Hit Karan Singh Rathore	Infosys	3.6
7	ENG22DS0043	SHUSHMA S	Infosys	3.6
8	ENG22DS0046	Thanya U	Infosys	3.6
9	ENG22DS0018	SRI SAI NITHIN P	Infosys	3.6
10	ENG22DS0036	Mahi Gupta	Edyufi	7
11	ENG22DS0047	Vinuraj Vamshi	Edyufi	7
12	ENG22DS0015	SAHANA S M	LTIMindtree	4.5

RESULTS

RESULT ANALYSIS (2021 BATCH)

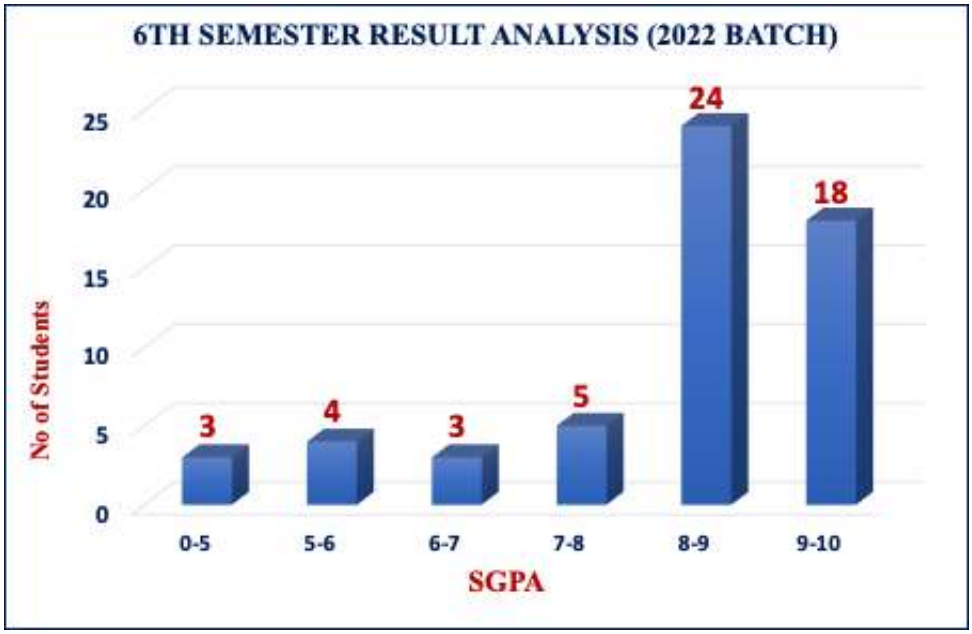


8TH SEMESTER TOPPERS (2021 BATCH)

USN	STUDENT NAME	SGPA
ENG21DS0001	AAKASH TOMAR	10
ENG21DS0002	ABHISHEK A	10
ENG21DS0003	ABHISHEK N	10
ENG21DS0006	AKSHAYA B	10
ENG21DS0008	ARYAN R G	10
ENG21DS0009	ASHIL ABRAHAM SHIBU	10
ENG21DS0010	BADIGI UDITH REDDY	10
ENG21DS0011	BASKARAN CHARU	10
ENG21DS0012	BINDHU B	10
ENG21DS0013	CHAITHRA SHREE P	10

RESULTS

RESULT ANALYSIS (2022 BATCH)

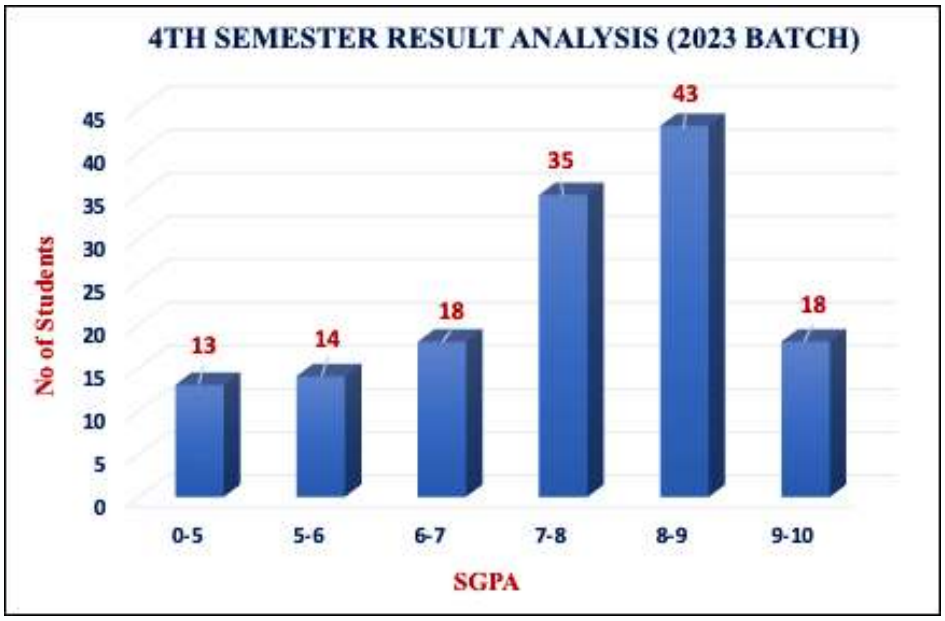


6TH SEMESTER TOPPERS (2022 BATCH)

USN	STUDENT NAME	SGPA
ENG22DS0039	NITIN PRAJWAL R	10
ENG22DS0026	ANSHUMAN	9.17
ENG22DS0042	SHERLYN ROSE	9.26
ENG22DS0015	SAHANA S M	9.39
ENG22DS0017	SANJANA T	9.39
ENG22DS0046	THANYA U GANIGA	9.39
ENG22DS0003	HARSHITA JEETENDRA BHUTE	9.57
ENG22DS0004	JANARDHAN K S	9.57
ENG22DS0010	R SINDHU	9.57
ENG22DS0024	VIRIKA OLIVIA SOANS	9.61

RESULTS

RESULT ANALYSIS (2023 BATCH)



4TH SEMESTER TOPPERS (2023 BATCH)

USN	STUDENT NAME	SGPA
ENG23DS0065	KANISHKA SHARMA	9.68
ENG23DS0063	KAMMALA KALYAN	9.5
ENG23DS0021	NAGRATANA	9.41
ENG23DS0073	MEGHANA N	9.32
ENG23DS0072	MANSI SHARMA	9.23
ENG23DS0125	SOUMYA SINGH	9.23
ENG23DS0061	JEEVITHA A M	9.23
ENG23DS0082	SADGI JAISWAL	9.23
ENG23DS0001	ADITYA S	9.18
ENG23DS0066	KONDASANI SARAYU	9.18

EDITORIAL COMMITTEE

DAYANANDA SAGAR UNIVERSITY

SCHOOL OF ENGINEERING

Department of Computer Science and Engineering
(Data Science)
Dayananda Sagar University
School of Engineering, Devarakaggalahalli, Harohalli,
Kanakapura Road, Bengaluru South District – 562 112

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

After few years of graduation, the graduates of Computer Science & Engineering (Data Science) will be able to:

PEO1: Knowledge delivery in terms of analytics and visualization, research, design, product implementation and optimization by using modern tools and techniques of data science to provide absolute resolution in social aspects.

PEO2: Applying strong mathematical and statistical foundations of Data Science to build powerful knowledge models to generate actionable insights, necessary for making data-driven decisions in multi-disciplinary areas.

PEO3: Function effectively as competent Data Science Professionals, Entrepreneurs or Researchers in the work place or maintain employment through lifelong learning including professional certifications.

PROGRAM OUTCOMES (POS)

PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. Design / development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues, and the consequent responsibilities relevant to the professional engineering practice.

PO7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOS)

PSO1. Apply the principles of Data Science including Data Visualization, Data Management and Data Security for building intelligent predictive models for solving real world problems.

PSO2. Apply Business Analytics, Visualization Tools & Statistical Tools acquired through professional society, certification programs, projects, Internship & Laboratory exercises to solve critical problems.

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