DISCUSSION ON "NAVIGATING THE FUTURE: INDUSTRY ACADEMIA ROUNDTABLE ON TECHNOLOGY TRENDS" 19TH JULY, 2024

Dayananda Sagar University hosted an insightful roundtable discussion on **"Navigating the Future: Industry- Academia Roundtable on Technology Trends" on 19th July from 10:30 to 12:30 pm** at its main campus, Harohalli, Kanakapura Road. The event brought together distinguished industry leaders to share their expertise on the evolving technology landscape. Dr. Udaya Kumar Reddy, Dean SoE, welcomed the guests and participants. Ms. Vaijayanthi B Desai, Director, Communications, Corporate & Government Relations, DSU, introduced all the distinguished speakers of the event.

Key highlights:

Mr.Balakrishnan Sreenivasan, IBM Distinguished Engineer, discussed about 'Technology evolution in enterprises' and shared the journey of enterprise evolution to industrialised IT and now moving to product centric IT delivery models, and how technology trends are helping business like Generative AI, Small Fit-for purpose models, Future of Quantum and Quantum safe, enterprises rethinking cloud strategy, exploiting data, transforming security to zero-trust models etc.

Mr. Jyothish Cherian, Vice President at WellsFargo**,** provided insights on 'The past, present, and future of big data', gave a holistic picture about the types of big data, its use-cases and its applications in enterprises and how it helps Data Science Cloud, and GEN AI dependency on it etc

Dr. Pethuru Raj PhD, SMIEEE, Vice President at Reliance Jio Platforms Ltd., explored the role of 'Edge AI in digital transformation' and gave an insight on what is Edge AI? AI model engineering, evaluation, optimisation, deployment and observability and the potential industrial use cases of Edge AI.

The engaging discussions fostered valuable knowledge-sharing between industry and academia, paving the way for collaborative innovation. Indeed, it was a very insightful and rewarding experience for the faculty of DSU School of Engineering!

WORKSHOP ON **"CRYPTOGRAPHY IN ACTION: INNOVATIONS IN ENCRYPTION AND DATA SECURITY" 29TH JULY, 2024**

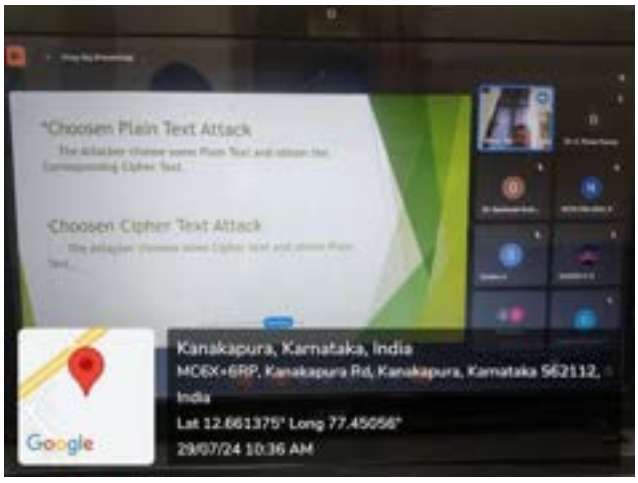
Under the DataScience@DSU club, the Department of CSE (Data Science) organised the **workshop "Cryptography in Action: Innovations in Encryption and Data Security" on 29th July 2024 at 10:00 am to 1:00 pm** aimed to provide participants with an in-depth understanding of the latest advancements in cryptographic techniques and their practical applications in securing data. The event brought together industry experts, researchers, and enthusiasts to discuss the evolving landscape of encryption and data security.

Key Takeaways

1. **Enhanced Encryption Techniques:** The session highlighted significant improvements in both symmetric and asymmetric encryption algorithms. Innovations such as the latest updates to AES and RSA were discussed, emphasizing their increased security and efficiency.
2. **Practical Insights:** Real-world applications of encryption were explored through various case studies, illustrating the critical role of encryption in protecting sensitive information. Participants gained valuable insights into the challenges faced by organizations and best practices for implementation.
3. **Future Directions:** The workshop provided a forward-looking perspective on emerging trends such as post- quantum cryptography and blockchain technology. The discussions on these topics underscored the need for continuous evolution in encryption techniques to stay ahead of potential threats.
4. **Hands-On Experience:** The interactive workshop allowed participants to gain practical experience with encryption tools, enhancing their understanding of how to implement and manage encryption solutions in real-world scenarios.

Conclusion

The workshop "Cryptography in Action: Innovations in Encryption and Data Security" successfully delivered valuable knowledge and practical skills related to modern encryption techniques. The diverse range of topics covered, from current innovations to future trends, equipped participants with a comprehensive understanding of the field. The hands-on sessions further ensured that attendees could apply what they learned in practical settings.



DISCUSSION ON **"DATA SCIENCE INNOVATION LAB" 23RD JULY 2024**

During the discussion, **Dr. Viktor K. Prasanna from the University of Southern California** emphasized the critical role of a Data Science Innovation Lab in fostering interdisciplinary research and practical applications of data science techniques. He highlighted the necessity of providing students and researchers with hands-on experience in areas such as data analytics, machine learning, and big data technologies. Dr. Prasanna advocated for the lab to bridge the gap between theoretical knowledge and practical implementation, preparing students for real-world challenges in the rapidly evolving field of data science.

Dr. Prasanna detailed the essential infrastructure and technological requirements for the lab. He recommended establishing high-performance computing clusters and cloud-based resources to handle large datasets and complex computations. Additionally, he suggested incorporating reconfigurable computing resources to offer flexibility and efficiency in managing diverse data science projects. Dr. Prasanna also stressed the importance of equipping the lab with advanced software tools and platforms, such as Apache Hadoop, Spark, and TensorFlow, to ensure students have access to the latest industry technologies. For curriculum development and research focus, he proposed a comprehensive approach that covers both fundamental and advanced topics in data science, including statistical methods, machine learning, data mining, and data visualization, supplemented by project-based learning and industry collaboration.

Dr. Prasanna underscored the importance of concentrating on emerging research areas, such as the Internet of Things (IoT), healthcare data analytics, smart cities, and cybersecurity, to keep the lab at the forefront of technological advancements and ensure that students are well-equipped to tackle contemporary data science challenges.

Present at the discussion were Dr. Udaya Kumar Reddy, Dean SOE; Dr. Kousalya Govardhanan, Dean of Research; Dr. Ramesh R. Galigekere, Dean (Academic); Dr. Shaila S. G., Chairperson and Professor, Dept. of CSE (DS); along with other department chairpersons and faculty members.

WORKSHOP ON **"EMERGING TRENDS IN AI AND DATA SCIENCE IN HEALTHCARE" 30TH JULY, 2024 TO 31ST JULY, 2024**

The DataScience@DSU Club, the Department of CSE (Data Science) organized a **Workshop on "Emerging Trends in AI and Data Science in Healthcare" held on 30th July, 2024 to 31st July 2024** at 10:00 AM- 11:00 AM organized by Dr. Shaila S G, Professor and Chairperson (DS), Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science), and Prof. Monish L, Assistant Professor, Dept. of CSE (Data Science). More than 50+ students have been registered for the event.

The event began with an overview of AI-powered tools in medical imaging, such as convolutional neural networks (CNNs), which improve the accuracy and speed of diagnosing conditions like tumors and fractures. In personalized medicine, AI algorithms analyze genetic and clinical data to tailor treatments to individual patients, increasing effectiveness. Data science facilitates predictive analytics for disease outbreaks and patient readmissions, optimizing healthcare resource allocation.

Over 50 students joined the session and learned about AI algorithms in personalized medicine that analyze genetic and clinical data to tailor treatments to individual patients, increasing effectiveness.

Conclusion

In conclusion, the event successfully highlighted the transformative impact of AI and Data Science in healthcare, inspiring participants to explore and contribute to this rapidly evolving field.

The knowledge gained from the session underscored the importance of these technologies in shaping the future of medical care, emphasizing the need for continued innovation and ethical considerations to maximize their benefits.

Resource Person: 1. Dr. Vinutha, Associate Professor, Dept. Of CSE (AIML), SOE, DSU
2. Prof. Pradeep Kumar K , Assistant Professor, Dept. Of CSE (AIML), SOE, DSU

Key Takeaways:

Students learned how AI-powered tools, such as convolutional neural networks (CNNs), are used to improve diagnostic accuracy and speed in medical imaging.

Students gained insights into how data science is used for predictive analytics in healthcare, including forecasting disease outbreaks and managing patient readmissions.

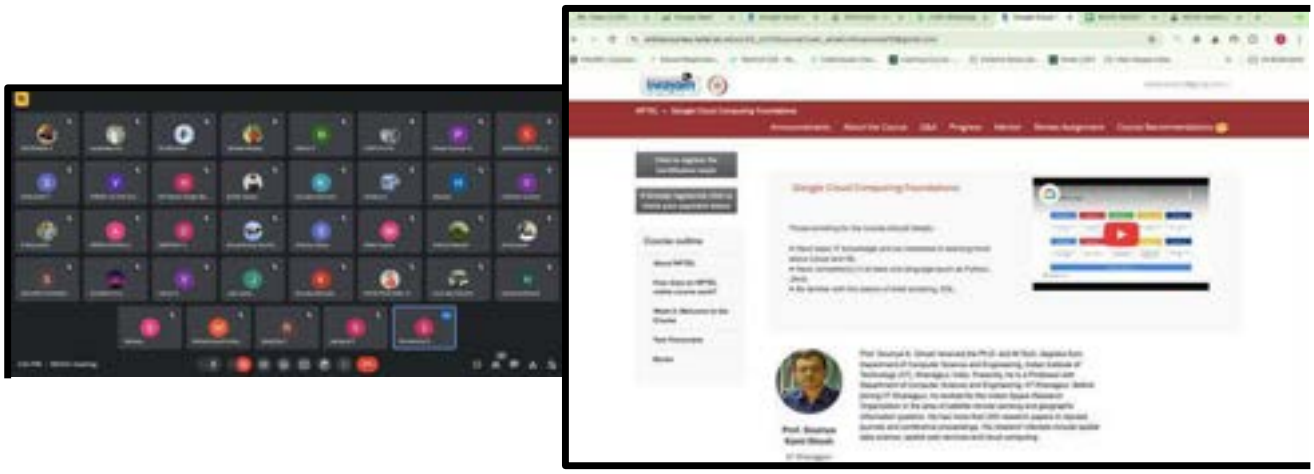
Objectives:

To provide students with a comprehensive understanding of how AI-powered tools, such as convolutional neural networks (CNNs), are utilized in medical imaging for enhancing diagnostic accuracy.

To illustrate how AI algorithms analyze genetic and clinical data to develop personalized treatment plans, showcasing advancements in individualized medical care.

To explain the role of data science in predictive analytics for healthcare, including forecasting disease outbreaks and optimizing patient management.

WORKSHOP ON **"NPTEL AWARENESS E-WORKSHOP" 09TH AUGUST, 2024 TO 10TH AUGUST, 2024**



The DataScience@DSU Club, the Department of CSE (Data Science) organized a **Workshop on "NPTEL Awareness E-Workshop" held on 09th August, 2024 to 10th August, 2024 at 03:00 PM-04:00 PM** organized by Dr. Shaila S G, Professor and Chairperson (DS), Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science), More than 80+ students have been joined for the event from 3rd sem and 5th Sem Data Science students..
The event aimed to raise awareness among students about the National Programme on Technology Enhanced Learning (NPTEL) and its significant role in online education.

Workshop Overview

The workshop provided an in-depth introduction to NPTEL, covering its mission, objectives, and the diverse range of courses available to students. Prof. Shivamma D. led the sessions, focusing on how students can effectively navigate the NPTEL platform, enroll in courses, and utilize the resources for academic growth and skill enhancement. The workshop also included a discussion on the value of NPTEL certifications in bolstering one's professional profile.
The event saw active participation, with more than 80 students from the 3rd and 5th semesters of the Data Science program joining the sessions. Students were highly engaged, asking pertinent questions and interacting with the facilitators. The workshop fostered a dynamic learning environment where participants could explore the practical aspects of using NPTEL for their academic endeavors.

Conclusion

The "NPTEL Awareness E-Workshop" was a resounding success, providing valuable insights and resources to students. Organized by Dr. Shaila S G and Prof. Shivamma D, the workshop effectively empowered students with the tools needed to leverage NPTEL for their academic and professional growth. The positive response from participants underscores the importance of continuing such initiatives to promote online learning.

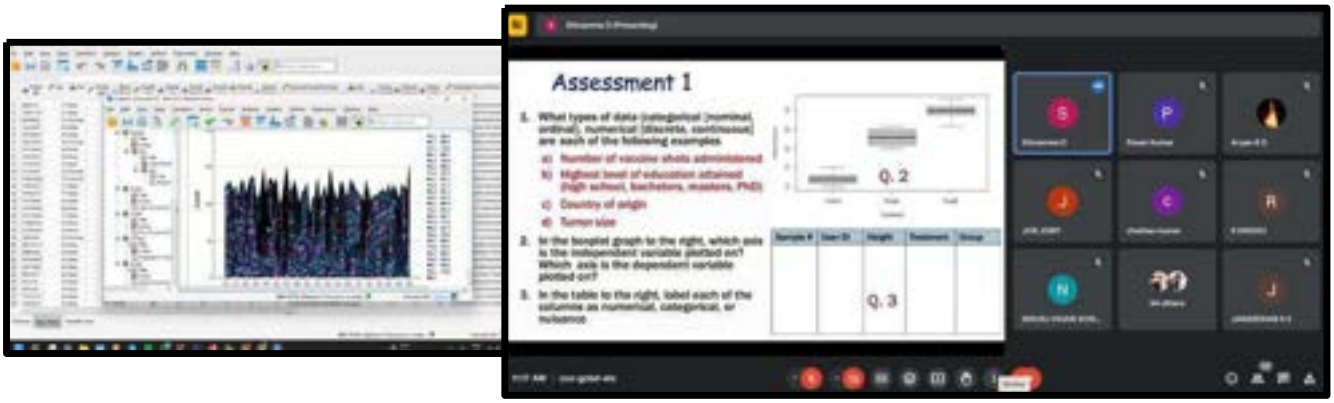
Resource Person: 1. Prof. Shivamma D, Assistant Professor, Dept. Of CSE (DS), SOE, DSU

Objectives:

To inform students about the National Programme on Technology Enhanced Learning (NPTEL) and the extensive educational resources it offers.
To guide participants on how to effectively navigate the NPTEL platform, including course selection, enrollment, and accessing study materials.
To emphasize the value of NPTEL certifications in enhancing academic credentials and improving career prospects.
To motivate students to incorporate NPTEL courses into their regular study routines for a more comprehensive learning experience

VALUE ADDED COURSE ON

"SPSS FOR APPLIED DATA SCIENCE" 19TH AUGUST, 2024 TO 21ST AUGUST, 2024



The DataScience@DSU Club, the Department of CSE (Data Science) organized a **Value Added Course on "SPSS for Applied Data Science" held on 19th August, 2024 to 21st August, 2024 at 10:30AM-1:00PM** organized by Dr. Shaila S G, Professor and Chairperson (DS), Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science), and Prof. Monish L, Assistant Professor, Dept. of CSE (Data Science). More than 70+ students have been registered for the event.

Day 1: 19th August 2024 Overview:

The inaugural day emphasized the relevance of data science in modern industries and introduced SPSS as a tool for statistical analysis, fostering participant familiarity with its functionalities.

Session 1: Importance of Data Science in Current Trends and the Role of SPSS

Time: 10:30 AM – 11:30 AM

Speaker: Shivamma D, Assistant Professor, CSE-DS

Highlights:

Introduction to data science and its industry applications.

Overview of trends like big data, AI, and ML transforming decision-making. Exploration of SPSS for statistical analysis with its user-friendly features.

Session 2: SPSS Basics, Syntax Efficient Data Analysis, and Crafting Import Data

Time: 11:30 AM – 12:30 PM

Speaker: Shivamma D, Assistant Professor, CSE-DS

Highlights:

Guided tour of the SPSS interface and fundamental functionalities.

Practical demonstrations on data input, syntax for efficient workflows, and importing datasets from varied sources.

Day 2: 20th August 2024

Session 1: Data Management

Time: 10:30 AM – 11:30 AM

Speaker: Shivamma D, Assistant Professor, CSE-DS

Highlights:

Techniques for organizing and cleaning data in SPSS.

Variable management, dataset merging, and splitting for seamless analysis workflows.

Session 2: Data Representation and Graphs

Time: 11:30 AM – 12:30 PM

Speaker: Monish L, Assistant Professor, CSE-DS

Highlights:

Introduction to data visualization techniques.

Hands-on graph creation, customization, and exporting for effective communication of insights.

Day 3: 21st August 2024 Overview:

Focused on advanced SPSS applications in data exploration and statistical analysis for meaningful insight derivation.

Session 1: Data Exploration

Time: 10:30 AM – 11:30 AM

Speaker: Shivamma D, Assistant Professor, CSE-DS

Highlights:

Exploration of data structures and patterns using SPSS tools.

Techniques for generating descriptive statistics and visualizing data distributions.

Session 2: Statistical Analysis

Time: 11:30 AM – 12:30 PM

Speaker: Monish L, Assistant Professor, CSE-DS

Highlights:

Application of t-tests, chi-square tests, and ANOVA.

Interpretation of SPSS-generated outputs for data-driven decision-making.

Key Features of the Course:

SPSS Essentials: Interface navigation, data input/output, and manipulation. Data Processing: Cleaning and transforming datasets for accurate analysis.

Statistical Methods: Descriptive and inferential statistics, correlation, and regression. Predictive Analytics: Introduction to predictive modeling techniques.

Real-World Applications: Business use cases for actionable insights. Hands-On Projects: Practical exercises to enhance analytical skills.

Course Objectives:

1. Develop SPSS proficiency for advanced data analysis.
2. Master statistical methods for data interpretation and hypothesis validation.
3. Gain practical knowledge through hands-on projects and case studies. 4. Understand predictive modeling techniques for data-driven forecasting.
5. Align competencies with industry standards using SPSS in business and research.
6. Foster analytical thinking to solve real-world problems.

VALUE ADDED COURSE ON
"EXPLORING C++"
A DETAILED GUIDE TO EFFECTIVE PROGRAMMING 19TH AUGUST, 2024 TO 23RD AUGUST, 2024

DataScience@DSU Club of the **Department of CSE (Data Science)** organized a **Value Added Course** titled "Exploring C++: A Detailed Guide to Effective Programming" from **19th to 23rd August 2024**, between **11:00 AM and 1:00 PM**. The course, coordinated by **Dr. Santhosh Kumar G**, **Dr. U. Pavan Kumar**, and **Prof. Manjula M**, saw participation from over **70 students**.

Highlights of the Sessions:

Day 1: Computer Programming Background & OOP Basics

Speakers: Prof. Manjula M and Dr. U. Pavan Kumar, Assistant Professor, CSE (DS)

Topics:

Introduction to C++ as a high-performance, object-oriented programming language.

Fundamentals of Object-Oriented Programming (OOP): Classes, Encapsulation, Inheritance, Polymorphism, and Abstraction.

Day 2: Functions in C++

Speaker: Prof. Nandini K, Assistant Professor, CSE

Topics:

Functions as reusable, modular code blocks for efficient programming. Concepts of abstraction, modularity, and reduced redundancy.

Day 3: Inheritance & Polymorphism

Speaker: Prof. Vishwas D B, Assistant Professor, CSE

Topics:

Hierarchical class structures and runtime behavior flexibility through polymorphism. Access controls: public, protected, and private inheritance.

Day 4: I/O Streams

Speaker: Prof. Kavyashree I Pattan, Assistant Professor, CSE

Topics:

Use of standard, file, and string streams for flexible data input/output operations. Formatting with manipulators and error handling in streams.

Day 5: Exception Handling

Speaker: Dr. Santhosh Kumar G, Associate Professor CSE (DS)

Topics:

Structured handling of runtime errors using try, catch, and throw.

Custom exceptions, stack unwinding, and use of noexcept for safer programming.

Objectives:

Emphasize high-performance, object-oriented, and cross-platform programming. Highlight modularity, portability, and the utility of standard libraries.

Prepare students for practical and scalable software development with C++.

VALUE ADDED COURSE ON
"MACHINE LEARNING MASTERY: BOOST YOUR SKILLS FROM BASICS TO BRILLIANCE" 19TH-23RD AUGUST, 2024

The Dept. of CSE(Data Science) is happy to share that the Value Added course on **"Machine Learning Mastery: Boost Your Skills from Basics to Brilliance"** was successfully conducted from **19th-23rd Aug 2024**, from 10:00 AM onwards in the online mode.

The main objective of the workshop was to make the participants have a good understanding about the Machine Learning basics.

The resource persons are DSU faculty : Prof. Sindhu A, Prof. Godhandaraman T, Prof. PoojaShree H R, Prof.Kavyashree I Pattan.

The Value Added course was attended by a total of 50 3rd year students, including 2 organizers who helped with various aspects of the event, such as registration, set up and doubts of participants.

The Value Added Coursewas structured into five sections: Basics of Machine Learning , About Dataset, Supervised Learning, Unsupervised Learning & Feature and Model Selection. The participants were encouraged to participate actively and asked questions throughout the session.

The feedback received from the participants was very positive. They appreciated the clear and concise explanations of Value Added Course.

Session Summary:

Day 1: Introduction to ML and Tools
Speaker: Prof. Pooja Shree H R, Assistant Professor, CSE
Topics: ML workflow, tools (Scikit-learn, TensorFlow), and real-world applications.

Day 2: Datasets and Data Preparation
Speaker: Prof. Sindhu A, Assistant Professor, CSE (DS)
Topics: Using Kaggle, dataset structure, training/testing datasets.

Day 3: Supervised Learning Techniques
Speaker: Prof. Kavyashree I Pattan, Assistant Professor, CSE
Topics: Algorithms like Logistic/Linear Regression and SVM with practical applications.

Day 4 (Session 1): Unsupervised Learning Algorithms Speaker: Prof. Sindhu A, Assistant Professor, CSE (DS)
Topics: KNN, K-Means, and Hierarchical Clustering for clustering and pattern detection.

Day 4 (Session 2): Feature and Model Selection
Speaker: Prof. Godhandaraman T, Assistant Professor, CSE (DS)
Topics: PCA, LDA, t-SNE, confusion matrix, and optimization strategies like cross-validation

“TEACHERS DAY CELEBRATIONS” 5TH SEPTEMBER, 2024

The Teachers' Day celebration at the Department of CSE (Data Science) was held with great enthusiasm to honor and appreciate the hard work and dedication of teachers. Organized under the guidance of Dr. Shaila S G, Professor & Chairperson, the event was attended by all faculty and staff members. Teachers' Day, celebrated annually on 5th September, marks the birth anniversary of Dr. Sarvepalli Radhakrishnan, a respected scholar and the second President of India.

The celebration began at 12:30 PM with a warm welcome by the Head of the Department, who expressed heartfelt gratitude to the teachers for their tireless efforts in shaping the future of the students. The head emphasized the indispensable role of educators in fostering knowledge, innovation, and values in their pupils. The event featured a series of engaging activities, including heartfelt speeches by students expressing their appreciation, followed by cultural performances that added vibrancy and joy to the celebration. Teachers were also presented with tokens of gratitude as a gesture of respect and acknowledgment of their invaluable contributions.

The gathering concluded with a group photo session and gathering, fostering camaraderie and mutual respect among faculty and staff. The Teachers' Day celebration was a resounding success, not only highlighting the importance of educators but also strengthening the bond among them, making it a truly memorable occasion.

“INAUGURAL CEREMONY OF IEEE INFORMATION THEORY SOCIETY STUDENT CHAPTER” **23RD SEPTEMBER, 2024**

The Inaugural ceremony of the I**EEE Information Theory Society (ITS) Student Chapter** was held on **September 23, 2024, at 10:00 AM at the CDSIMER Auditorium**, located in the F-Block Ground Floor. This highly anticipated event was organized by the Department of Computer Science and Engineering (Data Science), School of Engineering, in collaboration with the IEEE Information Theory Society (ITS). The ceremony aimed to officially launch the IEEE ITS Student Chapter at DSU, providing a platform for students and faculty to engage with one of the most prestigious professional societies in the realm of information theory and technology.

The ceremony was led by key organizers, including Dr. Shaila S G, Chairperson of the CSE - Data Science, Dr. Pavan Kumar U, Faculty Advisor IEEE ITS Student Branch, DSU and Prof. Sindhu A, Faculty Coordinator of the IEEE ITS Student Branch at DSU. The event was further supported by the leadership of Dr. Pushpa Mala S, the IEEE Student Branch Counselor, and Dr. Arun Balodi, Faculty Advisor of IEEE SPS and MTTS, DSU. The student committee played an integral role in managing the event, with Nitin Prajwal R, Chair of IEEE ITS, Pavan Kumar G, Vice-Chair, Janardhan KS, Secretary, and other IEEE ITS members taking the lead in student coordination.

The ceremony’s chief guest was **Dr. Premananda B S, Senior Member of IEEE and Associate Professor at RV College of Engineering, Bangalore**. Dr. Premananda's presence added immense value to the event, as he brought with him years of experience and expertise in the field of information theory, making his address a highlight of the ceremony.
The patrons and chief dignitaries of DSU also graced the occasion, including Dr. D. Hemachandra Sagar, Chancellor of DSU, and Dr. D. Premachandra Sagar, Pro Chancellor. Their guidance and support were instrumental in the successful launch of the IEEE ITS Student Chapter, further enhancing the academic standing of DSU.

Outcomes Achieved:

The event successfully marked the launch of the IEEE ITS Student Chapter, providing students with a dedicated platform to explore information theory and its applications.
Participants gained valuable insights from the chief guest’s speech, particularly regarding the relevance of information theory in fields like AI, data science, telecommunications, and machine learning.
The event fostered a sense of community and collaboration, with students expressing enthusiasm for future events and activities under the IEEE ITS banner.
Faculty members and organizers committed to supporting research initiatives and student projects in the area of information theory, ensuring the chapter's growth and sustainability.

“THE LOGO LEAGUE - IEEE INFORMATION THEORY SOCIETY“

23RD SEPTEMBER, 2024

The Logo League competition, organized on **September 23, 2024, at 2:00 pm** by the Department of Computer Science and Engineering (Data Science), in collaboration with the IEEE Information Theory Society (ITS) Student Chapter, was held at Dayananda Sagar University (DSU), A Block, Room A405. The event aimed to foster student creativity through the design of a logo that represents the IEEE ITS Student Chapter.

The Logo League was an event designed to encourage students to participate in the creative process by designing a logo that aligns with the mission and vision of the IEEE Information Theory Society. The event drew students from various disciplines, creating a space for innovation, creativity, and design thinking. The IEEE ITS Student Chapter provided participants with all the necessary tools and materials to successfully produce their designs, offering them a glimpse into the world of branding and logo creation. The event witnessed a good turnout, with students and faculty members actively involved throughout the competition. Participants were then briefed on the rules of the logo design contest, after which they began working on their entries. The competition was followed by the judging process, where the entries were evaluated based on a number of criteria, including creativity, relevance, and alignment with the society’s goals.

Organizers: Dr. Shaila S G Chairperson, CSE - Data Science, DSU , Dr. Pavan Kumar U Faculty Advisor, IEEE ITS Student Branch, DSU , Prof. Sindhu A Faculty Coordinator, IEEE ITS Student Branch, DSU.
Jury: Dr Rochna Roy, Assistant Professor, Dept. of English, SOE, DSU

Key Objectives:

The primary objectives of the Logo League were to: Encourage student creativity and design thinking.
Promote a deeper understanding of the IEEE Information Theory Society and its mission. Provide a platform for students to engage in logo design and branding activities.

Outcomes:

The event successfully brought together students from various disciplines, allowing them to express their creativity while learning about information theory and the IEEE ITS.
The IEEE Information Theory Society was introduced to a wider audience, with participants gaining valuable insights into the role of information processing in modern technology.

MATLAB DAY & WORKSHOP ON "UNLOCKING CREATIVITY: MATLAB FOR THE FUTURE"

25TH SEPTEMBER, 2024

The DataScience@DSU Club, the Department of CSE (Data Science), & IEEE student Chapter-Information Theory Society organized **MATLAB DAY & Workshop on "Unlocking Creativity: MATLAB for the Future,"** held on **25th September 2024, from 09:30 AM to 04:00 PM** in F block Auditorium, DSU, organized by Dr. Shaila S. G, Professor and Chairperson (DS), Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science), and Prof. Monish L, Assistant Professor, Dept. of CSE (Data Science). More than 100+ students have been registered and participated in the event.

Details of the Resource Person:

Mr. Avinash V, Application Engineer of MathWorks
Mr. Rakshith B S, Senior Application Engineer for MathWorks products
Subhajit Goswami, Senior Education Customer Success Specialist at MathWorks

Objectives:

To introduce participants to the advanced features and capabilities of MATLAB that can empower them to leverage the platform for innovative problem-solving in diverse fields such as engineering, data science, and research.
To provide hands-on training for attendees to learn and apply cutting-edge tools and techniques within MATLAB to unlock their potential in modeling, simulation, data analysis, and other areas.
To encourage the exploration of new trends and technologies, highlighting MATLAB's role in shaping the future of artificial intelligence, automation, and big data solutions.

Conclusion:

MATLAB's combination of versatility, ease of use, and comprehensive support makes it an invaluable resource for professionals, students, and researchers, driving innovation and efficiency in various domains.

INDUSTRY VISIT TO "HEWLETT PACKARD ENTERPRISE FOR DATA CENTER / TECHNOLOGY"- **27TH SEPTEMBER, 2024**

Department of CSE (Data Science) Faculties Dr. Shaila S G, Professor and Chairperson, Dr. U. Pavan Kumar, attended **an industry visit to Hewlett Packard Enterprise**, Bengaluru for Data Center/Technology Workshop on **27th September 202**4.
Niraj Kumar (Client Architecture) from H ewlett Packard Enterprise gave a brief idea about to set up High Performance Computing Lab at Dayananda Sagar University, Harohalli.

Objective:

The primary objective of the visit was to gain insights into Data Center technology adopted by HPE. The HPE Team took us to their research lab and Data centers. The Team discussed the HPC set-up, Equipment, Floor planning, Usage, Projects and innovations. Additionally, the visit aimed to explore potential academic- industry collaborations and gain a deeper understanding of the technologies shaping the future workforce. The visit was potentially informative and provided a unique opportunity to bridge the gap between academia and industry. We look forward to fostering a stronger relationship with HPE for setting up HPC- innovation labs and integrating these valuable insights into our academic programs to benefit both faculty and students.
Setting up a High Performance Computing (HPC) lab involves a combination of hardware, software, networking infrastructure, and system administration expertise.

Key Highlights:

Presentation by HPE Team
Visit to Data Centers and Research lab Data center set-up plan and its Usage. Collaboration and Industry Engagements.

Conclusion

A visit to HPE was a valuable opportunity to explore cutting-edge Data Center technology and gain insights into High Performance Computing (HPC) setups. The discussions with the HPE team highlighted the importance of academic-industry collaboration in shaping the future workforce. This collaboration promises to enhance educational outcomes for faculty and students alike, positioning us at the forefront of technological advancements in the field.

“PRE-PLACEMENT TRAINING: CORPORATE CULTURE” 27TH SEPTEMBER, 2024

The DataScience@DSU Club, the Department of CSE (Data Science) organized **Pre-Placement session on Pre- Placement: Corporate Culture** held on **27th September 2024, from 09:00 AM to 04:00 PM** in A441, SOE, DSU, organized by Dr. Shaila S G, Professor and Chairperson (DS), Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science), and Prof. Monish L, Assistant Professor, Dept. of CSE (Data Science). More than 50+ students have been registered and participated in the event.

Resource Person:

Ms. Roopa Priya JK, Placement Officer, SOE, DSU Ms. Ritu, Triner, CIL, SOE, DSU

Objectives:

The objective of the pre-placement talk includes: Understanding Corporate Expectations Enhancing Adaptability and Flexibility
Improving Communication and Interpersonal Skills Building Professional Identity
Developing a Global Mindset

Key Takeaways

Corporate environments are dynamic, often involving change due to market trends, technological advancements, and evolving customer demands. Adapting to these changes is essential for sustained success and growth in a corporate career.
Understanding corporate culture involves adopting a professional attitude, showing respect for colleagues and superiors, and maintaining a strong work ethic. These traits are highly valued in any organization and are key to career progression.
Many corporate cultures emphasize continuous learning. By cultivating a mindset of growth and development, employees can stay relevant and contribute to innovation within the organization. Every organization has its own communication norms, whether it is formal or informal, hierarchical or open.
Understanding these styles helps students navigate their workplace more effectively and build stronger working relationships. Working in multinational corporations or diverse environments requires awareness of cultural differences. Respecting these differences fosters inclusivity and ensures smoother interpersonal interactions.

Report on
"Ayudha Aaradhana 2024"

The DataScience@DSU Club, Department of CSE (Data Science) organized "**Ayudha Aaradhana 2024 : Ayudha Pooja"** celebration was a vibrant and spiritually uplifting event that brought together students, faculty, and staff to honor the tools of learning, knowledge, and profession. The event, which took place on 10th October 2024, was a part of the Navaratri celebrations, focusing on showing gratitude towards educational tools and instruments. It aimed to foster a sense of reverence for the materials that aid in academic and professional success, as well as to promote unity among the college community. More than 100+ students have participated in this event for 3rd semester and 5th Semester.

Event Highlights

Pooja Ceremony:

The event began with the Ayudha Pooja ritual, where the college's tools of learning were placed at the center of the altar. Traditional lamps were lit, and a priest or faculty member performed the rituals, invoking blessings for academic and professional growth. Special prayers were offered for the students and staff, seeking divine grace for a successful academic year.

Saraswati Pooja:

Alongside the Ayudha Pooja, a Saraswati Pooja was performed to honor the goddess of wisdom, knowledge, and arts. Books, instruments, and educational tools were placed on the altar, and students, especially those involved in arts and academics, sought blessings for success in their studies and future careers.

Faculty and Student Participation:

Faculty members from various departments took part in the rituals, and students were encouraged to actively participate in the ceremonies. Some students came forward to share their thoughts on the significance of Ayudha Pooja and how it inspires them to respect their studies and professional skills.

Cultural Performances:

Following the rituals, the event featured cultural performances by students, including classical dances, music recitals, and short speeches on the importance of Ayudha Pooja in today's academic and professional world. The performances were well received, adding a festive and joyful spirit to the event.

Distribution of Prasadam:

At the end of the ceremony, traditional sweets and prasadam (offering to the gods) were distributed to all attendees, symbolizing the sharing of blessings and prosperity among the college community.

SCHOOL OF ENGINEERING

DAYANANDA SAGAR UNIVERSITY

DEPARTMENT OF CSE-DATA SCIENCE

PRESENTS

AYUDHA ARADHANA '24

"Celebrate the spirit of Ayudha Pooja with us, filled with blessings and joy!"

VENUE: "A" BLOCK, A-410

DATE: 10th October,2024

TIME: 11.00AM Onwards

ALL ARE CORDIALLY INVITED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Report on

Power BI for Business Intelligence : Unlocking Data Driven Decisions

The Power BI 2-day workshop was designed to provide participants with a comprehensive understanding of Power BI and equip them with the skills to create, analyze, and visualize data using Power BI Desktop and Power BI Service. The session focused on empowering participants to use Power BI for transforming raw data into interactive dashboards and reports. A total of 50+ participants are benefited from the workshop.

Resource Person:

Dr. Vivek Raj S N
Assistant Professor, VIT, Vellore

Learning Objectives

By the end of the workshop, participants were expected to:

- Understand the core functionalities of Power BI.
- Develop skills to import and transform data.
- Create interactive visualizations and dashboards.
- Gain insights from data models.
- Publish and share reports in Power BI Service.

Agenda

Day 1: Introduction & Basics of Power BI

Session 1: Introduction to Power BI
Overview of Power BI Desktop, Power BI Service, and Power BI Mobile.
Understanding the role of Power BI in business intelligence.
Installation and setup of Power BI Desktop.

Session 2: Data Import and Transformation
Importing data from various sources (Excel, databases, web, etc.).
Using Power Query Editor for data cleaning and transformation.
Creating relationships between different data tables.

Session 3: Data Modeling
Introduction to Data Modeling.
Understanding relationships and cardinality.
Creating calculated columns and measures using DAX (Data Analysis Expressions).

Day 2: Visualizations & Publishing Reports

Session 4: Creating Visualizations
Introduction to different types of visualizations (Bar charts, Pie charts, Line charts, etc.).
Creating interactive reports and dashboards.
Working with slicers and filters.

Session 5: Advanced Analytics
Creating and using DAX functions for advanced calculations.
Implementing drill-down functionality in reports.
Creating KPIs and using conditional formatting.

Session 6: Publishing and Sharing Reports
Publishing reports to Power BI Service.
Managing workspaces and sharing reports.
Setting up scheduled data refresh and security (Row-Level Security).

Key Takeaways
Hands-on Experience: Participants had the opportunity to work on real-world datasets, allowing them to apply the concepts they learned immediately.
Enhanced Data Skills: By the end of the workshop, participants were able to create sophisticated reports and dashboards that conveyed data-driven insights.
Understanding of Power BI Service: Participants learned how to publish and share reports securely using Power BI Service, facilitating collaboration within their teams.


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Report on
Pre-Placement Talk on Edgeverve

EdgeVerve Systems, a subsidiary of Infosys, left a memorable mark as the first company to visit and deliver a Pre-Placement Talk at Dayananda Sagar University's (DSU) Harohalli campus for the 2026 batch placement drive on October 24, 2024 from 11:30 am to 02.00 pm. The EdgeVerve team provided valuable insights into the company's vision, broad career pathways, and diverse roles, along with an in-depth overview of their recruitment process for both internships and full-time positions, sparking strong enthusiasm among students.

Experts Mr. Rajeshwar Rao (Head of Talent Acquisition), Mr. Karthik V R (Business Manager, Learning), and Mr. Arun Kumar (Talent Acquisition) dedicated their time to engage directly with students. The session drew over 1,000 enthusiastic 5th-semester students from DSU's School of Engineering, including more than 50 students from the Department of CSE (Data Science), creating an atmosphere brimming with curiosity and ambition. Through interactive discussions and a Q&A session, students gained a comprehensive understanding of EdgeVerve's culture, innovation-driven projects, and growth opportunities.

This impactful event was meticulously organized by Mr. Vijay Kumar S., Director of the Training & Placement Department; Ms. Roopa Priya, Placement Officer; Prof. Shivamma D., Assistant Professor; and Dr. Shaila S G, Professor and Chairperson of the Department of CSE (Data Science). Their efforts ensured a seamless, engaging experience, setting an inspiring tone for the placement season. EdgeVerve's visit, coupled with DSU students' enthusiastic participation, underscores the university's

commitment to preparing top-tier talent for careers in technology and innovation.

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Report on
"Swachh Bharat Abhiyan: A Clean India Initiative"

The DataScience@DSU Club, the Department of CSE (Data Science) organized awareness program on **" Swachh Bharat Abhiyan: A Clean India Initiative"** held on 25th October 2024, from 1:30 PM to 4:00 PM in Paduvanagere village and Cheeluru village, organized by Dr. Shaila S G, Professor and Chairperson (DS), Dr. Santhosh kumar G, Associate Professor Prof. Mahendra M K, Assistant Professor, Dept. of CSE (Data Science), and Prof. Chandrakala L, Assistant Professor, Dept. of CSE (Data Science). Bhagyajyothi, Physical Educational Teacher, Dsu , supported to complete the program successfully.

Swachh Bharat Abhiyan (Clean India Mission) is a nationwide campaign initiated by the Government of India. Launched on October 2, 2014. Its primary objective is to promote cleanliness, hygiene, and sanitation across the country, aiming to eliminate open defecation and improve solid waste management.

Key Objectives

1. **Elimination of Open Defecation:** By promoting the construction of toilets and encouraging communities to adopt hygienic practices.
2. **Waste Management:** Enhancing waste segregation, recycling, and proper disposal mechanisms to maintain clean surroundings.
3. **Awareness and Education:** Educating citizens about the importance of cleanliness and encouraging public participation through campaigns and workshops.

Achievements

1. **Toilet Construction:** The program has led to the construction of over 100 million toilets, significantly reducing the prevalence of open defecation across rural India.

2. **Community Engagement:** The campaign has successfully mobilized communities to participate in cleanliness drives and educational initiatives, fostering a sense of ownership and responsibility.
3. **Health Improvements:** Enhanced sanitation facilities have contributed to a decline in waterborne diseases, improving overall public health.

Challenges Despite notable progress, the initiative faces several challenges:

- **Sustainability of Infrastructure:** Maintaining and ensuring the proper use of constructed toilets remains a critical issue.
- **Behavioral Change:** Transforming long-standing habits related to sanitation and hygiene is an ongoing challenge.
- **Urban Waste Management:** Rapid urbanization has created complexities in managing waste effectively, leading to increased pollution and health risks.

Future Directions To build on the successes of the Swachh Bharat Abhiyan, the following strategies are recommended:

1. **Innovative Waste Management Solutions:** Embracing technology and innovative practices to enhance waste processing and recycling efforts.
2. **Strengthening Community Participation:** Encouraging local bodies and NGOs to play a more active role in promoting cleanliness and sustainability.
3. **Monitoring and Evaluation:** Implementing robust mechanisms to assess the impact of initiatives and ensure accountability.

Conclusion

Swachh Bharat Abhiyan has made remarkable strides toward a cleaner India, but sustained efforts and community involvement are essential for long-term success. As we move forward, let us commit to the principles of cleanliness and hygiene, ensuring a healthier environment for future generations.

SWACHH BHARAT

CONVENERS:

Dr Amit Bhatt
Vice Chancellor, DSU.

Dr. Udaya Kumar Reddy KR
Dean, SoE

Dr. Shaila S G
Professor & Chairperson,
CSE(DS),SOE, DSU

ORGANIZERS:

Dr. Santhosh Kumar G
Associate Professor,CSE(DS)

Prof. Mahendra M K
Assistant Professor, CSE(DS)

Prof. Chandrakala L
Assistant Professor,CSE(DS)

Dayananda Sagar University
School of Engineering
Department of C S E (Data Science)
Devarakaggalahalli, Harohalli,
Kanakapura Road, Karnataka 562112

AWARENESS PROGRAM ON

SWACHH BHARAT ABHIYANA

"Empowering Communities for a Greener Future"

DATE: 25-10-2024

VENUE:
PADUVANAGERE
CHEELURU


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Report on

"**Plantation of plants for Good health**"

The DataScience@DSU Club, the Department of CSE (Data Science) organized awareness program on **"Plantation of plants for Good health"** held on 25th October 2024, from 11:00 AM to 12:30 PM in DSU campus, organized by Dr. Shaila S G, Professor and Chairperson (DS), Dr. Santhosh kumar G, Associate Professor Prof. Mahendra M K, Assistant Professor, Dept. of CSE (Data Science), and Prof. Chandrakala L, Assistant Professor, Dept. of CSE (Data Science). Bhagyajyothi, Physical Educational Teacher, Dsu , supported to complete the program successfully.

Objectives:

The plantation of plants is a vital component in promoting ecological balance and mitigating the effects of climate change. This report examines the significance of planting initiatives, effective practices for successful cultivation, and the myriad benefits associated with increasing green spaces. It emphasizes the necessity of collaborative efforts in promoting plant cultivation for a sustainable future**.**

The pressing challenges posed by climate change, habitat destruction, and urbanization have highlighted the urgent need for environmental action. Planting trees and other vegetation not only enhances biodiversity but also contributes to healthier

ecosystems. This report explores the multifaceted benefits of planting, alongside best practices for effective implementation.

1. **Environmental Significance**
    - Carbon Sequestration:.
    - Air Quality Improvement:
    - Soil Conservation:
2. **Economic Benefits**
    - Resource Provision
    - Job Creation
3. **Social and Psychological Benefits**
    - Community Well-being
    - Mental Health

Conclusion

The plantation of plants is a critical action toward fostering environmental sustainability and resilience. By implementing effective planting strategies and promoting community involvement, we can significantly enhance our ecosystems, improve air quality, and support economic growth. It is imperative that individuals, organizations, and governments collaborate to prioritize planting initiatives for the benefit of current and future generations.

Report on
Dance and Singing Competition

The DataScience@DSU Club of the Department of CSE (Data Science), Dayananda Sagar University, organized a spectacular **Dance and Singing Competition** on 20th November 2024 at 2 pm organised by Dr. Shaila S G, Professor and Chairperson, Prof. Shivamma D and Prof. Monish L, Assistant Professor, Dept. of CSE (DS) for the 3rd and 5th Semester students . The event aimed to showcase the immense talent of students and provide them with a platform to express their creativity, passion, and cultural diversity.
The competition brought together enthusiastic participants from various semesters, supported by an audience of students, faculty, and staff. The event highlighted the importance of extracurricular activities in fostering creativity, confidence, and camaraderie among students.

Event Highlights

Dance Competition
The dance segment saw participation from 5 dynamic teams, each delivering captivating performances across various styles such as classical, contemporary, folk,

and fusion. The participants showcased exceptional energy, creativity, and coordination, captivating the audience and judges alike. Performances were judged based on creativity, synchronization, stage presence, and overall impact.

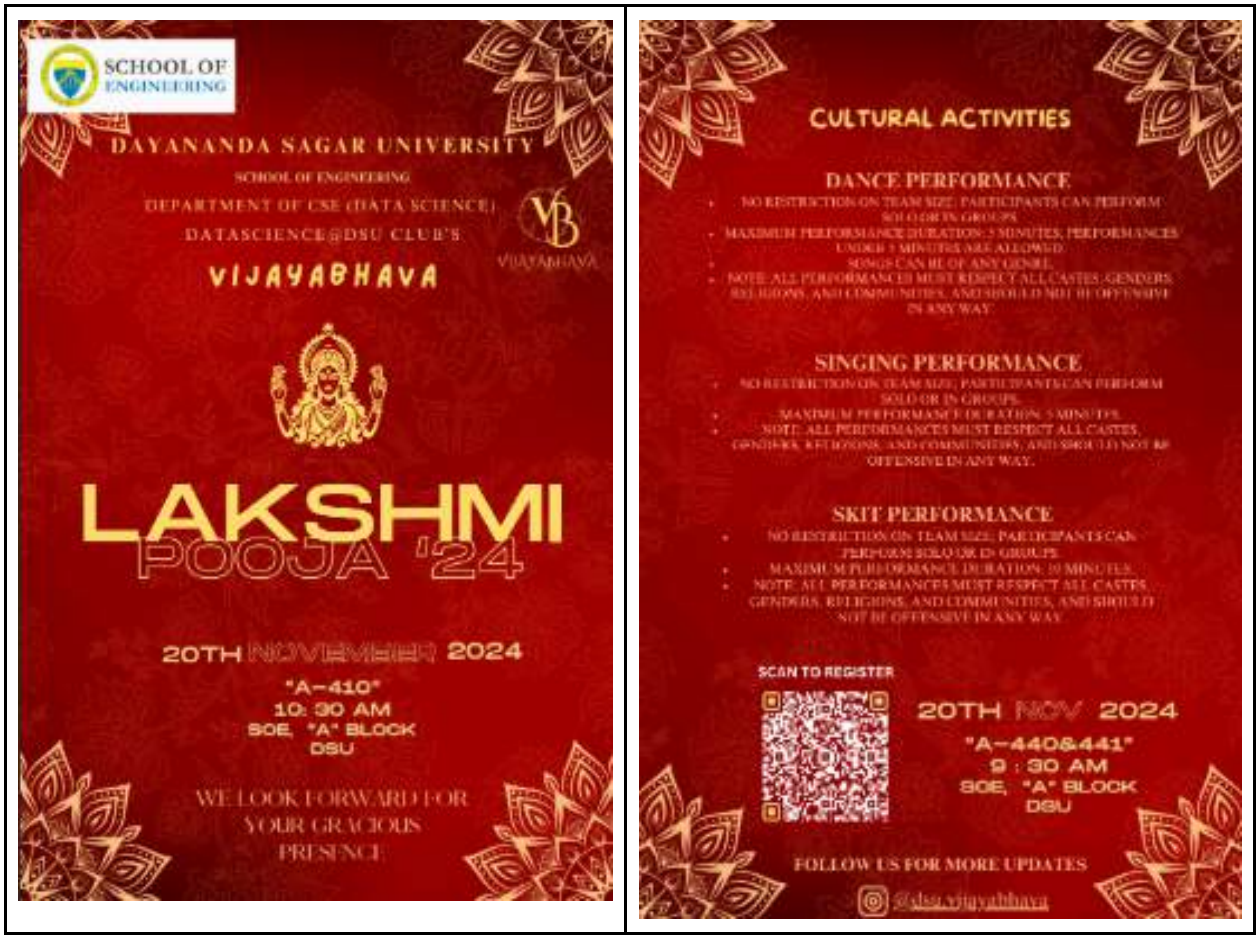
Singing Competition

The singing competition featured 4 talented teams competing in various genres, including classical, folk, pop, and Bollywood. Both solo and group performances enthralled the audience with their melodious and heartfelt renditions. Judges evaluated the performances based on vocal quality, song selection, presentation, and emotional connection with the audience.

Judges Panel

The event featured a distinguished panel of judges comprising **Dr. Rochna Roy,** Assistant Professor, Department of Basic Sciences who provided valuable feedback to the participants and encouraged them to excel further.

Brochure and Glimpses of the Event

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Details of the Winners

Prize	Names	Competition
1st Prize	Thungashree I L Shreya Praveen Pavithra S Siri A K	Dance Competition
2nd Prize	Nikhil T Prabhu Shiva Hemanth Hari Teja R Adarsh B Pawar Jagapathi Babu S Janardhan K S Sujeeth Kumar D S Kuruba Veeresh Pavan Kumar G	Dance Competition
3rd Prize	Jeevitha A M Kruthika S Sudhanya athri K S	Dance Competition
1st Prize	Gowthami R Anusha Kogundematt Sambhram M N	Music Competition
2nd Prize	Bhavya Shree	Music Competition
3rd Prize	Daksh Balai Venkat Nivas Reddy Adrija Sarkar	Music Competition

Report on
Lakshmi Pooja Celebration 2024

The DataScience@DSU Club of the Department of CSE (Data Science) organized the Lakshmi Pooja Celebration 2024 on 20th November 2024 at 11:30 am as part of the Navaratri festivities organised by Dr. Shaila S G, Professor and Chairperson, Prof. Shivamma D and Prof. Monish L, Assistant Professor, Dept. of CSE (DS). This spiritually enriching event brought together students, faculty, and staff to honor Goddess Lakshmi, the deity of wealth, prosperity, and well-being.

The event emphasized gratitude for blessings received and sought divine grace for continued academic, personal, and professional success.

Event Highlights

Pooja Ceremony

The celebration commenced with the Lakshmi Pooja, where a splendidly decorated altar, adorned with flowers, lamps, and traditional offerings, set the tone

for the rituals. Shivamma D. and Monish L led the arrangements for the ceremony, ensuring an authentic and spiritually immersive experience. A priest or faculty member conducted the pooja, invoking Goddess Lakshmi's blessings for prosperity and harmony.

Chanting and Devotional Songs

The rituals were complemented by devotional songs and hymns, including the recitation of Lakshmi Ashtottara Shatanamavali (108 Names of Lakshmi). The melodious chants uplifted the spiritual ambiance, engaging everyone present in a shared moment of reverence.

Student and Faculty Engagement

The event saw enthusiastic participation from over 100 students, primarily from the 3rd and 5th semesters, along with faculty members. Shivamma D. and Monish personally invited attendees to participate in the pooja, fostering a sense of community and shared purpose.

Cultural Performances

Following the pooja, the event featured cultural performances, including devotional dances, musical recitals, and short speeches by students on the significance of Lakshmi Pooja in their lives. The cultural segment was vibrant and inspiring, reflecting the talents and creativity of the DSU community.

Distribution of Prasadam

The event concluded with the distribution of prasadam, including traditional sweets and offerings, symbolizing the sharing of blessings and prosperity among all attendees.


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WE LOOK FORWARD FOR YOUR GRACIOUS PRESENCE


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Report on
Five Days Value Added Course
on
"Hands-On Training: To Become a Microsoft Azure Data Engineer "

Introduction

The demand for cloud-based solutions has surged dramatically, driving the need for skilled professionals in cloud computing. Microsoft Azure, being one of the top cloud platforms, offers a range of certifications and hands-on training to help individuals become proficient in its tools and services. The 5-day value-added course, conducted by **Dr. Suresh Arumugam**, Associate Professor, Department of Data Science, School of Engineering, Dayananda Sagar University, was held from **25th November 2024 to 29th November 2024**. This course provided participants with expert insights and practical experience in leveraging Microsoft Azure for data engineering.

Key Areas Covered in Hands-On Training

1. Azure Fundamentals

- Overview: Introduction to Azure services, architecture, and tools.
- Practical Exercises: Setting up Azure accounts, resource groups, and virtual networks.
- Skills Acquired: Understanding the Azure ecosystem and foundational services like compute, storage, and networking.

2. Azure Data Storage

- Azure SQL Database: Setting up and managing relational databases.
- Azure Blob Storage: Handling unstructured data like images, videos, and logs.
- Cosmos DB: Working with globally distributed, multi-model databases.

- Practical Exercises: Creating databases, writing queries, and setting up storage accounts.

3. Data Integration Using Azure Data Factory

- Overview: Learning to create ETL (Extract, Transform, Load) workflows.
- Hands-On Activities: Building and scheduling data pipelines to integrate disparate data sources.
- Key Features: Utilizing triggers, monitoring pipelines, and optimizing performance.

4. Azure Synapse Analytics

- Purpose: Unified analytics platform for data integration, warehousing, and big data processing.
- Training: Setting up Synapse workspaces, running SQL analytics, and integrating with Power BI.
- Real-World Applications: Designing enterprise-level data warehouses for business intelligence.

5. Streamlining Data with Azure Stream Analytics

- Real-Time Data Processing: Learning to analyze and process data streams.
- Practical Application: Implementing scenarios like IoT telemetry and social media sentiment analysis.

6. Azure Databricks

- Overview: A collaborative platform for big data analytics and AI solutions.
- Hands-On Training: Running Spark-based workloads, creating notebooks, and integrating machine learning models.
- Skills Acquired: Data wrangling, model training, and visualization.

7. Security and Monitoring

- Data Security: Implementing Azure policies, RBAC (Role-Based Access Control), and encryption.
- Monitoring: Using Azure Monitor and Log Analytics for performance tracking and troubleshooting.

Learning Outcomes

Upon-completing-the-training,-participants-will:

1. Gain proficiency in designing and managing Azure-based data pipelines.
2. Understand advanced analytics and reporting using Azure Synapse and Power BI.
3. Build robust storage and processing solutions tailored for organizational needs.
4. Be equipped with hands-on skills to appear for the Microsoft Certified: Azure Data Engineer Associate certification exam.

Advantages of Hands-On Training

- Practical Knowledge: Participants work on real-world projects, bridging the gap between theory and-practice.
- Industry Relevance: Training is aligned with industry standards and demands.
- Collaboration and Networking: Opportunity to work with peers and learn from certified trainers.


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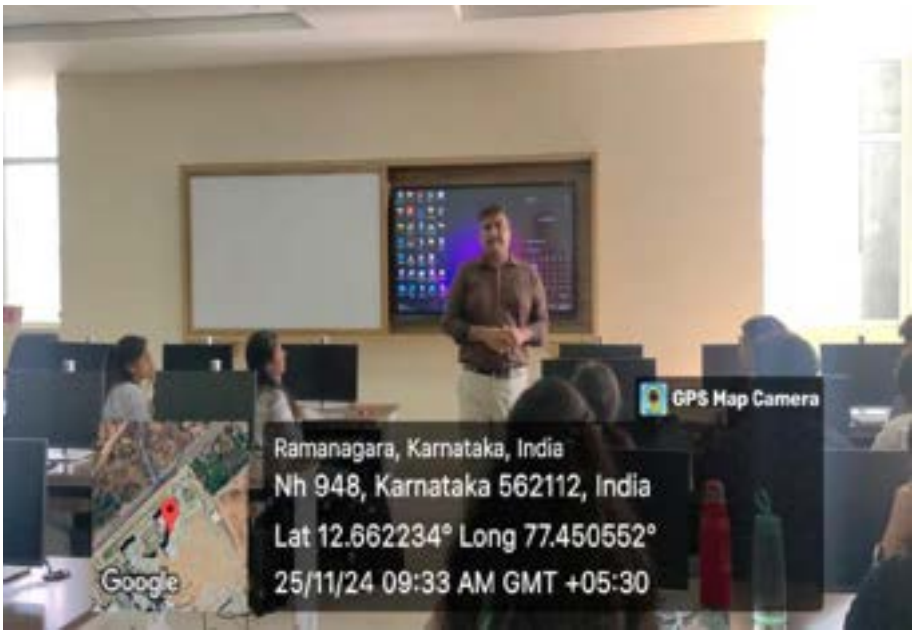
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING (DATA SCIENCE)
HANDS-ON TRAINING: TO BECOME A MICROSOFT AZURE DATA ENGINEER (DP-203)
Microsoft Azure
25th Nov 2024 to 29th Nov 2024
9:30 am to 4:00 pm
A410
Guest Speaker:
Dr. Suresh Arumugam
Register Now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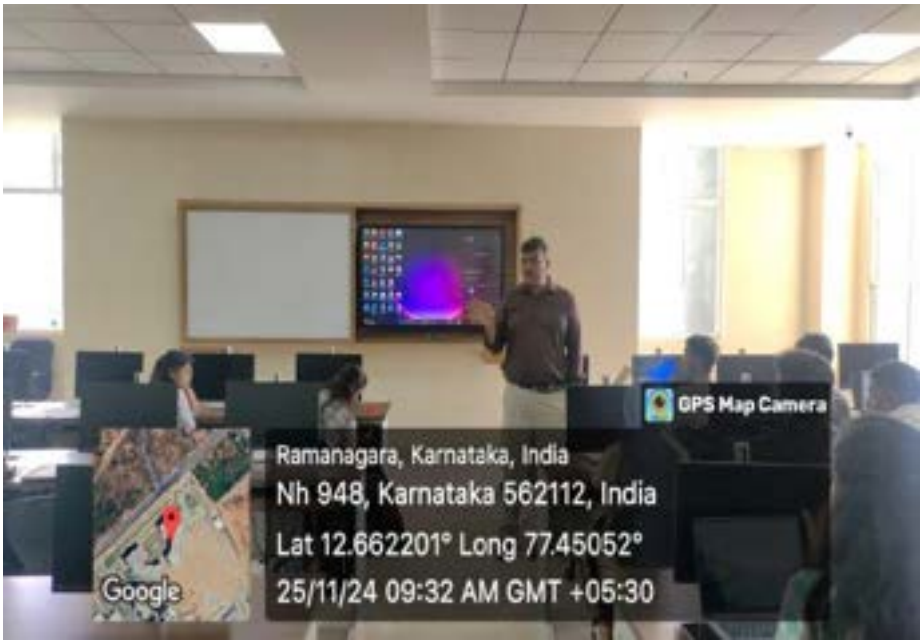

Report on

Thirty Hours Value Added Course
on
" AI and ML in Nursing & Healthcare "

Introduction

The rapid advancements in Artificial Intelligence (AI) and Machine Learning (ML) are transforming industries, with healthcare being one of the most impacted domains. The integration of AI and ML in nursing and healthcare has opened up avenues for improved diagnostics, personalized treatment, operational efficiency, and patient engagement. Recognizing this potential, a 30-hour hands-on training program was conducted from **26th October 2024 to 27th November 2024, from 6:00 PM to 7:00 PM** in Hybrid Mode.

The program, led by **Dr. Shaila SG** and **Prof. Sindhu A** from the Department of CSE (Data Science), with coordination by **Dr. Jamuna P,** School of Nursing aimed to equip participants with foundational and advanced knowledge in AI and ML applications tailored for nursing and healthcare.

This course provided participants with insights into machine learning models, neural networks, data analytics, and the Internet of Things (IoT), along with practical examples and case studies to emphasize the impact of AI in healthcare.

Key Areas Covered in Hands-On Training

1. Introduction to Artificial Intelligence (AI) and Machine Learning (ML)

- **Overview:**
  - Basics of AI and ML concepts, significance, and historical development.
- **Key Takeaways:**
- Difference between AI, ML, and Deep Learning.
- Role of AI in healthcare transformation.

2. Importance and Applications of AI and ML in Nursing & Healthcare

- **Applications:**
- Diagnosis and prognosis prediction.
- Drug discovery.

- Personalized medicine.
- Automation of administrative tasks.
- **Use Cases Discussed:**
- AI-based virtual assistants for patient support.
- ML algorithms for disease prediction using patient history.

3. Types of Machine Learning and its Classification

- **Topics Covered:**
- **Supervised Learning:** Regression and classification tasks.
- **Unsupervised Learning:** Clustering and association.
- **Reinforcement Learning:** Learning through rewards and penalties.
- **Key Techniques Explored:**
- Decision Trees: Classification tasks in healthcare.
- Bayesian Classifier: Probabilistic disease prediction.
- Regression Models: Continuous outcome prediction.

4. Neural Networks, Their Types, and Processing

- **Overview:** Neural Networks and their learning mechanisms.
- **Topics Covered:**
- **Deep Neural Networks (DNNs):** For processing complex data.
- **Convolutional Neural Networks (CNNs):** For medical image analysis.
- **Recurrent Neural Networks (RNNs):** For sequential data processing (e.g., ECG).
- **Natural Language Processing (NLP):** Applications in extracting clinical insights.
- **Advanced Architectures:** Exploration of Transformers, GANs, and other architectures.
- **Computer Vision Applications:** Disease detection from X-rays and MRIs.

5. Internet of Things (IoT)

- **Topics Explored:**
- IoT basics, tools, and process flow in healthcare.
- **Use Cases:**
- Remote Patient Monitoring: Real-time tracking of vitals.
- Smart wearables for health tracking.
- Integration of IoT with AI for efficient data analysis.

6. Data Representation

- **Focus Areas:**
- Understanding data types and data frames.
- Data cleaning: Handling noise and missing values.
- Data standardization and normalization.

7. Data Analytics

- **Overview:**
- Tools such as R and Python for healthcare data analysis.
- **Hands-On Activities:**
- Visualizations using Matplotlib and Seaborn.
- Statistical summaries and hypothesis testing.

8. Healthcare Data Analysis

- **Key Topics:**
- Sources of healthcare data: EHRs, IoT devices, genomic data.
- Pre-processing techniques: De-identification and standardization.

- Data handling for building analysis-ready datasets.

9. Healthcare Datasets - Examples and Case Studies

- **Examples:**
- MIMIC-IV: Intensive care datasets.
- UK Biobank: Genomic and health data.
- **Case Studies Discussed:**
- Early cancer detection using ML.
- AI models for predicting patient recovery outcomes.

10. Case Studies and Future Trends in AI Healthcare

- **Notable Trends:**
- Use of Federated Learning for secure data sharing.
- Integration of AI into telemedicine.
- AI-driven robotics in surgeries.

Learning Outcomes

· Comprehensive understanding of AI and ML applications in healthcare.
· Skills in designing and implementing ML models for medical use cases.
· Insights into managing and analyzing healthcare datasets effectively.
· Familiarity with IoT and its role in remote patient monitoring.

Advantages of Hands-On Training

- **Practical Knowledge:** Hands-on exposure to tools and techniques.
- **Industry Alignment:** Focused on real-world healthcare challenges.
- **Expert Guidance:** Interaction with experienced resource persons.

Conclusion

The training program offered a robust platform to explore AI and ML in the context of nursing and healthcare, emphasizing practical implementation and future trends. It empowered participants with technical expertise and industry-relevant skills, preparing them for innovations in healthcare technology.

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COLLEGE OF NURSING SCIENCES
DAYANANDA SAGAR UNIVERSITY, Harohalli
Devarakagalli,Harohalli,Kanakapura Road
Ramanagar Dt.,Bengaluru-562112

Programme Objectives

The objective of this program is to equip participants with foundational knowledge and practical skills in AI and machine learning, enabling them to apply advanced technologies such as neural networks, data analytics, and IoT in nursing and healthcare, ultimately enhancing patient care, operational efficiency, and decision-making through data-driven innovations.

Coordinated by:

- Dr. Jamuna P. P.
  Associate Professor,
  College of Nursing Sciences, DSU.
- Student coordinator: Mrs. Julice Varughese.

Resource Persons

Dr.Shaila S G
Professor & Chairperson
CSE(Data Science)

Transforming Nursing and Healthcare Through AI: Insights, Innovations, and Future Trends

Prof. Sindhu A
Assistant Professor
CSE(Data Science)

A-Block A411 is available both offline and online.

October 26, 2023 - November 27, 2024
Time: 6:00 PM - 7:00 PM

Agenda

Unit No.	Course Content (Topics and Subtopics)	Hours
1	Introduction to AI and ML: Importance and Applications in Nursing & Healthcare	3
2	Types of ML & Classification: Decision Tree, Bayesian Classifier, Regression	2
3	Neural Networks: Learning Models, Deep Neural Networks, CNNs, RNNs, NLP, Computer Vision	4
4	Internet of Things (IoT): Introduction, Process Flow, Tools, Use Cases, Remote Patient Monitoring	3
5	Data Representation: Introduction, Data Frames, Standardization, Handling Noise/Missing Values, Transformation	4
6	Data Analytics: Tools like R, Python, Statistical and Visualization Tools	4
7	Healthcare Data Analysis: Sources, Pre-processing, Handling, Analysis-ready Datasets	5
8	Healthcare Datasets: Examples and Case Studies	3
9	Case Studies and Future Trends in AI Healthcare	2


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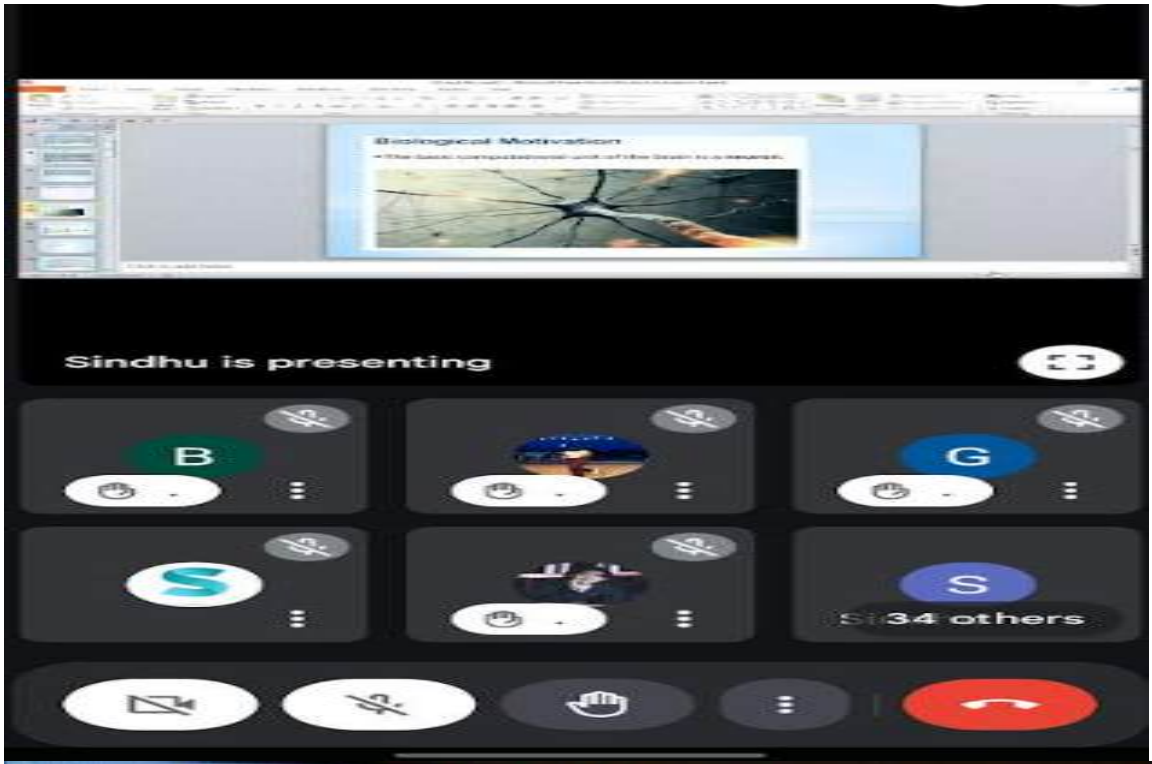
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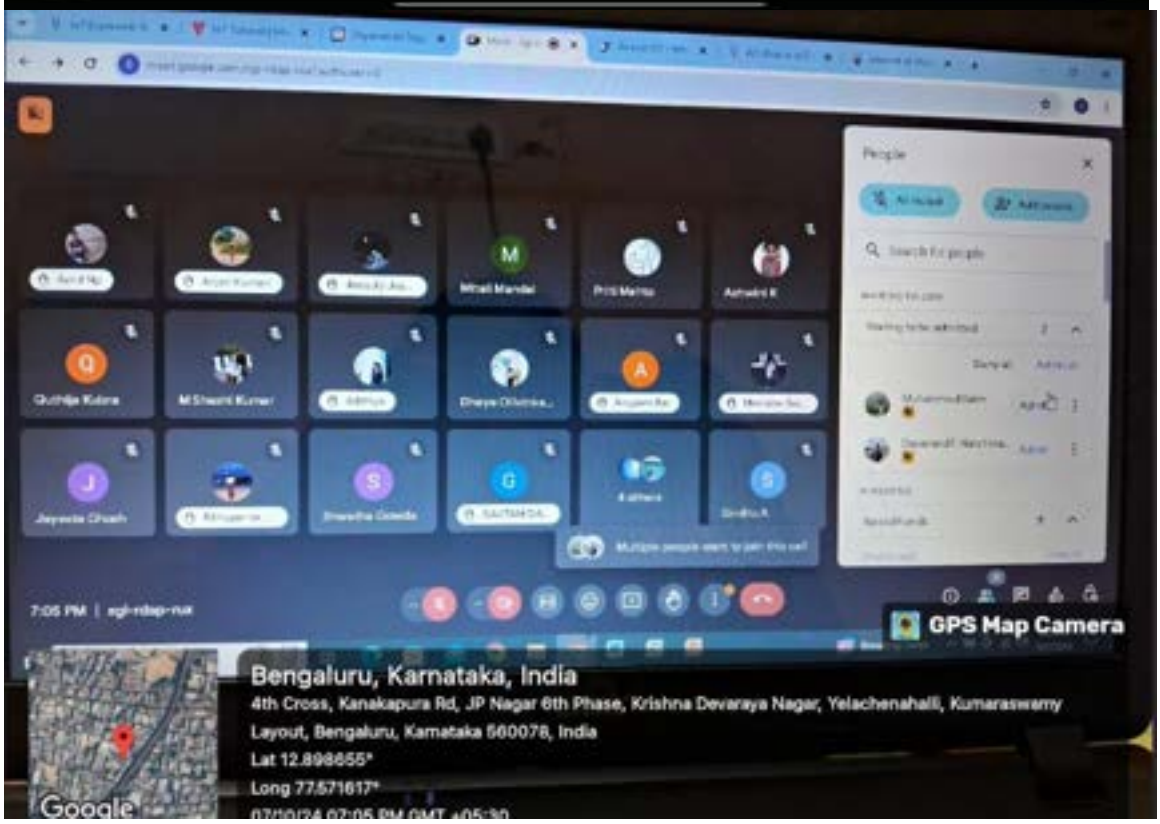
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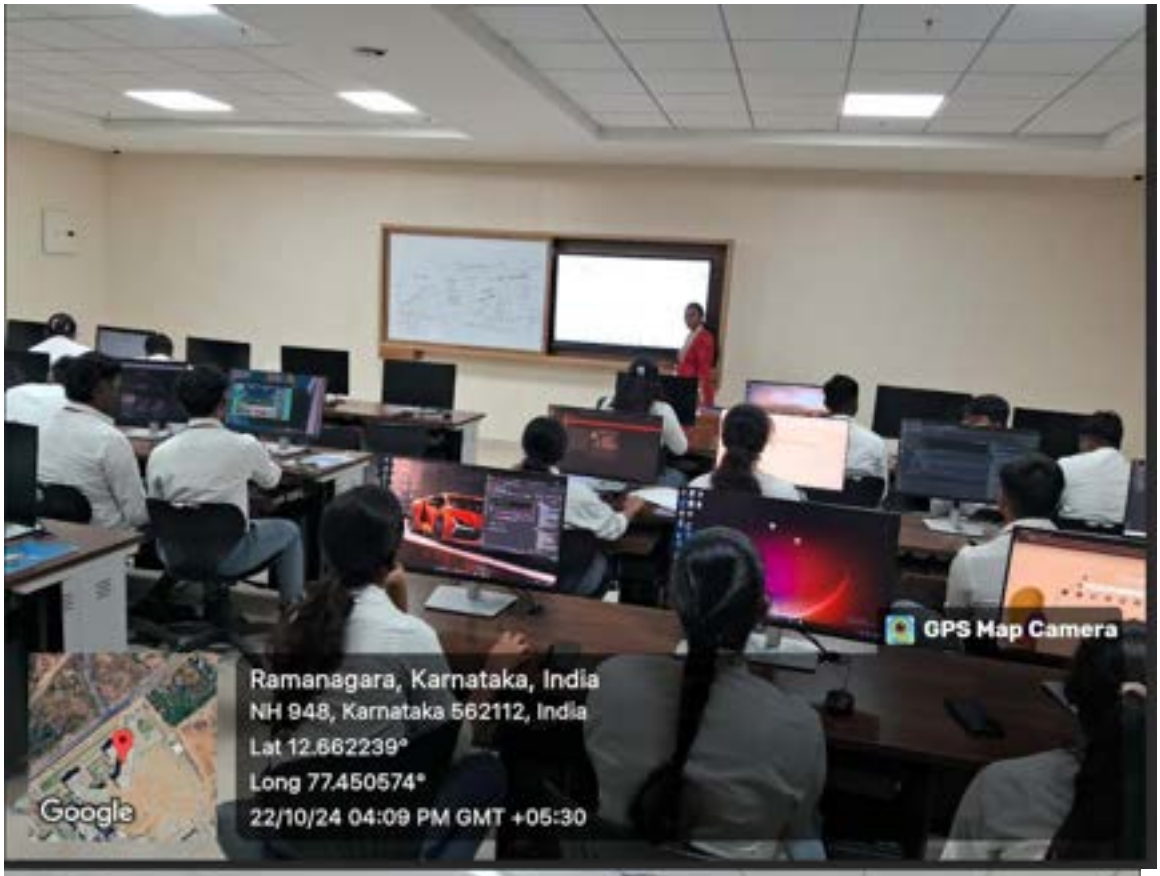
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Report on

Industry Connect Session with Oppo

The Generation Green (Gen G) Campaign, an initiative by OPPO India in collaboration with AICTE and managed by 1M1B, was successfully organized on 10th December 2024 The event featured a vibrant cultural segment with a flash mob, skit, and fashion show, followed by activities like a scavenger hunt, ideathon, and face painting. Distinguished guests, including Syed Khaja Mohiddin M.E - Senior Environmental Officer, KSPCB, and Ms. Anuka Kumar - Head of CSR, OPPO India, graced the inauguration. Esteemed speakers, including the Vice Chancellor and Associate Dean - Dr. Naveen Babu, emphasized the importance of sustainability and innovation.

Post lunch, the event continued with a roundtable discussion where the dean sir, chairpersons of all departments and faculty members shared their ideas on sustainability. They engaged in collaborative discussions with Mr. Syed Khaja Mohiddin M.E. and Ms. Anuka Kumar. During the session, an MoU was signed to promote collaboration in research, organize awareness campaigns, and support initiatives for startups.

Outcome of the event:

The MoU between Oppo and 1M1B will enhance innovation and startup opportunities for DSU students. Additionally, the Government of Karnataka's commitment to support and fund projects from the School of Engineering will provide valuable resources for growth and research, fostering a thriving entrepreneurial ecosystem at DSU.

Report on
Smart India Hackathon (SIH) 2024

The Smart India Hackathon (SIH) is an annual innovation challenge organized by the Government of India to provide students with a platform to solve real-world problems. SIH 2024 encouraged participants to apply their creativity and technical expertise to develop innovative solutions for societal, industrial, and governmental challenges. The program was held on 12th December 2024 . Three students Janardhan, Sujeeth & OM Singh along with Mentor Prof. Manjula were participated in SIH 2024.

Development of innovative solutions to real-world problems faced by industries, government bodies, and society.

Creation of working prototypes and ideas that have the potential for real-world

deployment.

Addressed challenges in diverse domains such as healthcare, education, agriculture, environment, transportation, and smart cities.

- Participation in SIH 2024 provided the following key takeaways:
- Enhanced technical skills in [specific areas, e.g., AI, IoT, or web development].
- Real-world problem-solving experience with industry-standard tools and practices.
- Improved teamwork, leadership, and communication skills.
- Exposure to working under time constraints in a competitive environment.

Participating in the Smart India Hackathon 2024 was a transformative experience for our team. It provided a unique opportunity to contribute to solving real-world problems, fostered technical growth, and inspired us to innovate further. We look forward to applying these learnings in future endeavors to make a positive impact on society.


#SIH Software Edition
GRAND
FINALE 2024
SMART INDIA

Report
on
TECHSPARK MATLAB EXPO 2024

The DataScience@DSU Club, the Department of CSE (Data Science) & IEEE student Chapter-Information Theory Society organized **TECHSPARK MATLAB EXPO 2024** held on 24th December 2024, from 10:00 AM to 03:00 PM in A410, SOE, DSU, organized by Dr. Shaila S G, Professor and Chairperson (DS), Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science), and Prof. Monish L, Assistant Professor, Dept. of CSE (Data Science). More than 50+ students have registered and participated in the event.

Details of the Resource Person:

- ***Dr. Debanand Singdeo, works as Senior Engineer in the Education Team at MathWorks India Private Limited (Bangalore)***
- *Mr. Rakshith B S is the Senior Application Engineer for MathWorks products at CoreEL Technologies, Bengaluru*

The resource persons officially inaugurated MATLAB EXPO at DSU, marking the beginning of the event. The program commenced with a warm welcome to the experts, followed by addresses from the dignitaries, who spoke to the assembled audience. The event concluded with students enthusiastically participating in and enjoying their MATLAB learning experience

The primary objective is to inspire creativity by showcasing how MATLAB can be used to develop future-ready solutions and enhance productivity in academic and industrial applications.

Objectives:

- **Showcase Innovation:** Highlight the innovative use of MATLAB to solve real-world problems through creative projects.
- **Promote Knowledge Sharing:** Provide a platform for students and professionals to share their knowledge and expertise in MATLAB programming and applications.
- **Encourage Collaboration:** Foster teamwork and collaboration by involving participants from various disciplines in project development.
- **Enhance Technical Skills:** Provide participants an opportunity to enhance their programming, modeling, and simulation skills using MATLAB.


DAYANANDA SAGAR UNIVERSITY
MathWorks
INSTITUTION'S INNOVATION COUNCIL
CoreEL Technologies
School of Engineering
Devarakaggalahalli, Harohalli, Kanakapura Road
Ramanagara Dt., Bengaluru – 562 112
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)
In association with
IEEE ITS, MathWorks & CoreEL Technologies
is Organising
TECHSPARK MATLAB EXPO 2024
Date:
24TH DEC 2024 @ 10:00 am to 3:00 pm
Experts:
• Dr. Debanand Singdeo
Senior Engineer, Education Team at MathWorks
• Mr. Rakshith B S, Senior Application Engineer
for MathWorks CoreEL Technologies
Venue:
A410, A Block, Harohalli, DSU
Conveners:
Dr. Amit Bhatt
Vice Chancellor, DSU
Dr. Udaya Kumar Reddy KR
Dean, SoE
Dr. Naveen Babu
Assoc. Dean, SOE
Dr. Shaila S G
Chairperson, Dept. of CSE (DS)
Organizers:
Prof. Shivamma D
Assistant Professor
Prof. Monish L
Assistant Professor
Dept. of CSE(DS)
Student Co-ordinators
Nitin Prajwal R
Janardhan K S
Pavan Kumar


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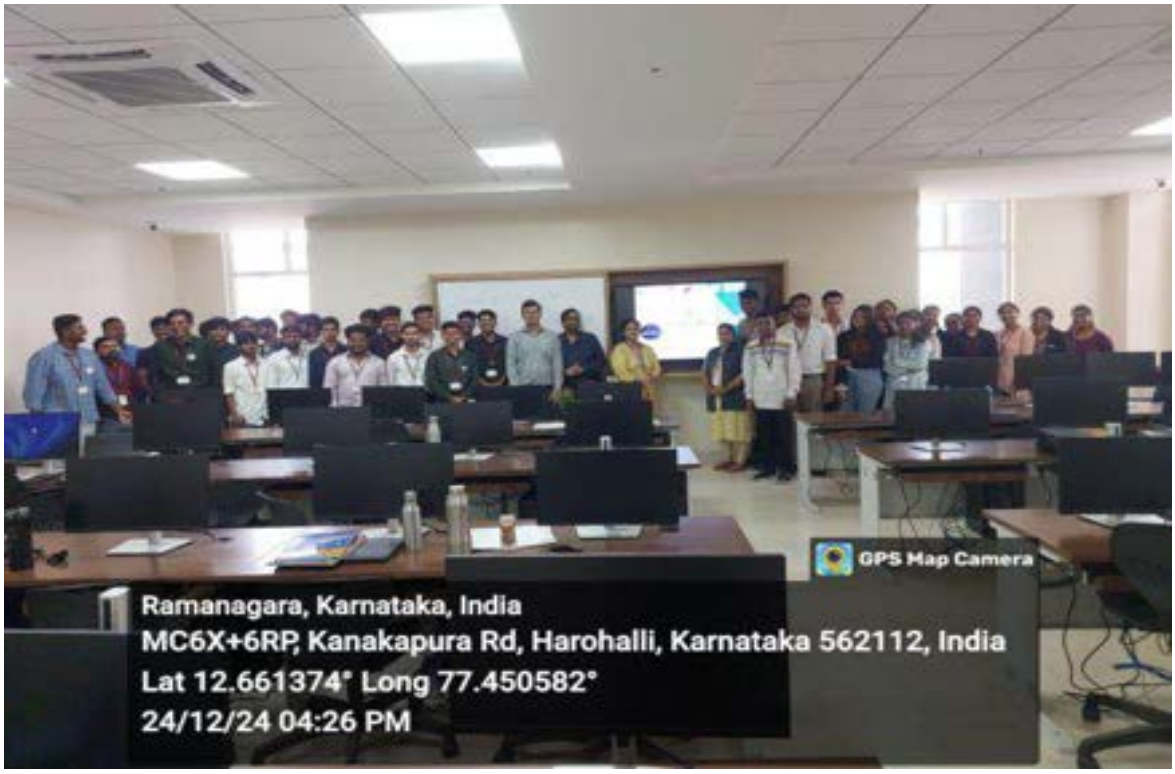
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Report on
Dance and Singing Competition

The DataScience@DSU Club of the Department of CSE (Data Science), Dayananda Sagar University, organized a spectacular **Dance and Singing Competition** on 20th November 2024 at 2 pm organised by Dr. Shaila S G, Professor and Chairperson, Prof. Shivamma D and Prof. Monish L, Assistant Professor, Dept. of CSE (DS) for the 3rd and 5th Semester students . The event aimed to showcase the immense talent of students and provide them with a platform to express their creativity, passion, and cultural diversity.
The competition brought together enthusiastic participants from various semesters, supported by an audience of students, faculty, and staff. The event highlighted the importance of extracurricular activities in fostering creativity, confidence, and camaraderie among students.

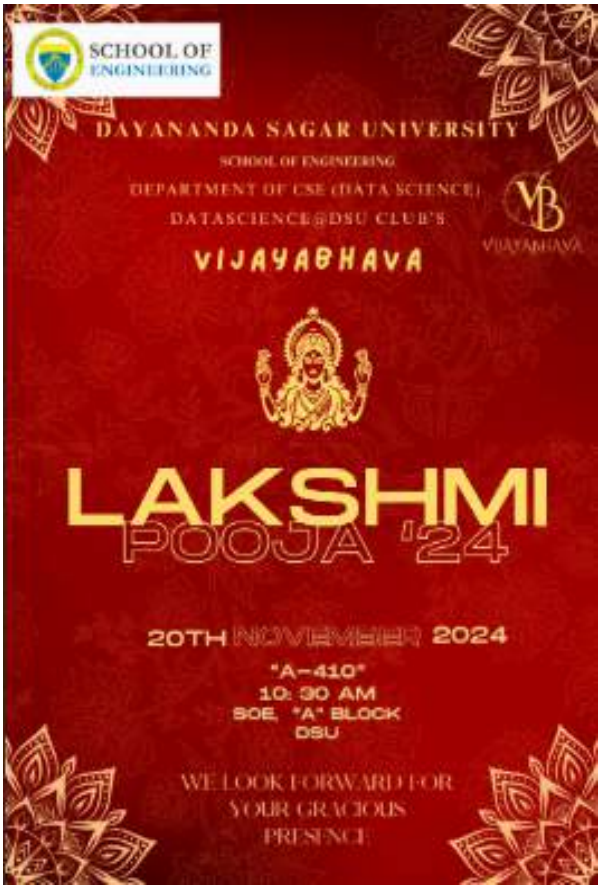
Event Highlights

Dance Competition
The dance segment saw participation from 5 dynamic teams, each delivering captivating performances across various styles such as classical, contemporary, folk, and fusion. The participants showcased exceptional energy, creativity, and coordination, captivating the audience and judges alike. Performances were judged based on creativity, synchronization, stage presence, and overall impact.

Singing Competition
The singing competition featured 4 talented teams competing in various genres, including classical, folk, pop, and Bollywood. Both solo and group performances enthralled the audience with their melodious and heartfelt renditions. Judges evaluated the performances based on vocal quality, song selection, presentation, and emotional connection with the audience.

Judges Panel
The event featured a distinguished panel of judges comprising **Dr. Rochna Roy,** Assistant Professor, Department of Basic Sciences who provided valuable feedback to the participants and encouraged them to excel further.

Brochure and Glimpses of the Event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VIJAYABHAVA
LAKSHMI POOJA '24
20TH NOVEMBER 2024
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DSU
WE LOOK FORWARD FOR YOUR GRACIOUS PRESENCE


CULTURAL ACTIVITIES
DANCE PERFORMANCE
SINGING PERFORMANCE
SKIT PERFORMANCE
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Details of the Winners

Prize	Names	Competition
1st Prize	Thungashree I L Shreya Praveen Pavithra S Siri A K	Dance Competition
2nd Prize	Nikhil T Prabhu Shiva Hemanth Hari Teja R Adarsh B Pawar Jagapathi Babu S Janardhan K S Sujeeth Kumar D S Kuruba Veeresh Pavan Kumar G	Dance Competition
3rd Prize	Jeevitha A M Kruthika S Sudhanya athri K S	Dance Competition
1st Prize	Gowthami R Anusha Kogundematt Sambhram M N	Music Competition
2nd Prize	Bhavya Shree	Music Competition
3rd Prize	Daksh Balai Venkat Nivas Reddy Adrija Sarkar	Music Competition

Report on
Lakshmi Pooja Celebration 2024

The DataScience@DSU Club of the Department of CSE (Data Science) organized the Lakshmi Pooja Celebration 2024 on 20th November 2024 at 11:30 am as part of the Navaratri festivities organised by Dr. Shaila S G, Professor and Chairperson, Prof. Shivamma D and Prof. Monish L, Assistant Professor, Dept. of CSE (DS). This spiritually enriching event brought together students, faculty, and staff to honor Goddess Lakshmi, the deity of wealth, prosperity, and well-being.

The event emphasized gratitude for blessings received and sought divine grace for continued academic, personal, and professional success.

Event Highlights

Pooja Ceremony

The celebration commenced with the Lakshmi Pooja, where a splendidly decorated altar, adorned with flowers, lamps, and traditional offerings, set the tone

for the rituals. Shivamma D. and Monish L led the arrangements for the ceremony, ensuring an authentic and spiritually immersive experience. A priest or faculty member conducted the pooja, invoking Goddess Lakshmi's blessings for prosperity and harmony.

Chanting and Devotional Songs

The rituals were complemented by devotional songs and hymns, including the recitation of Lakshmi Ashtottara Shatanamavali (108 Names of Lakshmi). The melodious chants uplifted the spiritual ambiance, engaging everyone present in a shared moment of reverence.

Student and Faculty Engagement

The event saw enthusiastic participation from over 100 students, primarily from the 3rd and 5th semesters, along with faculty members. Shivamma D. and Monish personally invited attendees to participate in the pooja, fostering a sense of community and shared purpose.

Cultural Performances

Following the pooja, the event featured cultural performances, including devotional dances, musical recitals, and short speeches by students on the significance of Lakshmi Pooja in their lives. The cultural segment was vibrant and inspiring, reflecting the talents and creativity of the DSU community.

Distribution of Prasadam

The event concluded with the distribution of prasadam, including traditional sweets and offerings, symbolizing the sharing of blessings and prosperity among all attendees.


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VIJAYABHAVA
LAKSHMI POOJA '24
20TH NOVEMBER 2024
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Report on
Five Days Value Added Course
on
"Hands-On Training: To Become a Microsoft Azure Data Engineer "

Introduction

The demand for cloud-based solutions has surged dramatically, driving the need for skilled professionals in cloud computing. Microsoft Azure, being one of the top cloud platforms, offers a range of certifications and hands-on training to help individuals become proficient in its tools and services. The 5-day value-added course, conducted by **Dr. Suresh Arumugam**, Associate Professor, Department of Data Science, School of Engineering, Dayananda Sagar University, was held from **25th November 2024 to 29th November 2024**. This course provided participants with expert insights and practical experience in leveraging Microsoft Azure for data engineering.

Key Areas Covered in Hands-On Training

1. Azure Fundamentals

- Overview: Introduction to Azure services, architecture, and tools.
- Practical Exercises: Setting up Azure accounts, resource groups, and virtual networks.
- Skills Acquired: Understanding the Azure ecosystem and foundational services like compute, storage, and networking.

2. Azure Data Storage

- Azure SQL Database: Setting up and managing relational databases.
- Azure Blob Storage: Handling unstructured data like images, videos, and logs.
- Cosmos DB: Working with globally distributed, multi-model databases.

- Practical Exercises: Creating databases, writing queries, and setting up storage accounts.

3. Data Integration Using Azure Data Factory

- Overview: Learning to create ETL (Extract, Transform, Load) workflows.
- Hands-On Activities: Building and scheduling data pipelines to integrate disparate data sources.
- Key Features: Utilizing triggers, monitoring pipelines, and optimizing performance.

4. Azure Synapse Analytics

- Purpose: Unified analytics platform for data integration, warehousing, and big data processing.
- Training: Setting up Synapse workspaces, running SQL analytics, and integrating with Power BI.
- Real-World Applications: Designing enterprise-level data warehouses for business intelligence.

5. Streamlining Data with Azure Stream Analytics

- Real-Time Data Processing: Learning to analyze and process data streams.
- Practical Application: Implementing scenarios like IoT telemetry and social media sentiment analysis.

6. Azure Databricks

- Overview: A collaborative platform for big data analytics and AI solutions.
- Hands-On Training: Running Spark-based workloads, creating notebooks, and integrating machine learning models.
- Skills Acquired: Data wrangling, model training, and visualization.

7. Security and Monitoring

- Data Security: Implementing Azure policies, RBAC (Role-Based Access Control), and encryption.
- Monitoring: Using Azure Monitor and Log Analytics for performance tracking and troubleshooting.

Learning Outcomes

Upon-completing-the-training,-participants-will:

1. Gain proficiency in designing and managing Azure-based data pipelines.
2. Understand advanced analytics and reporting using Azure Synapse and Power BI.
3. Build robust storage and processing solutions tailored for organizational needs.
4. Be equipped with hands-on skills to appear for the Microsoft Certified: Azure Data Engineer Associate certification exam.

Advantages of Hands-On Training

- Practical Knowledge: Participants work on real-world projects, bridging the gap between theory and-practice.
- Industry Relevance: Training is aligned with industry standards and demands.
- Collaboration and Networking: Opportunity to work with peers and learn from certified trainers.


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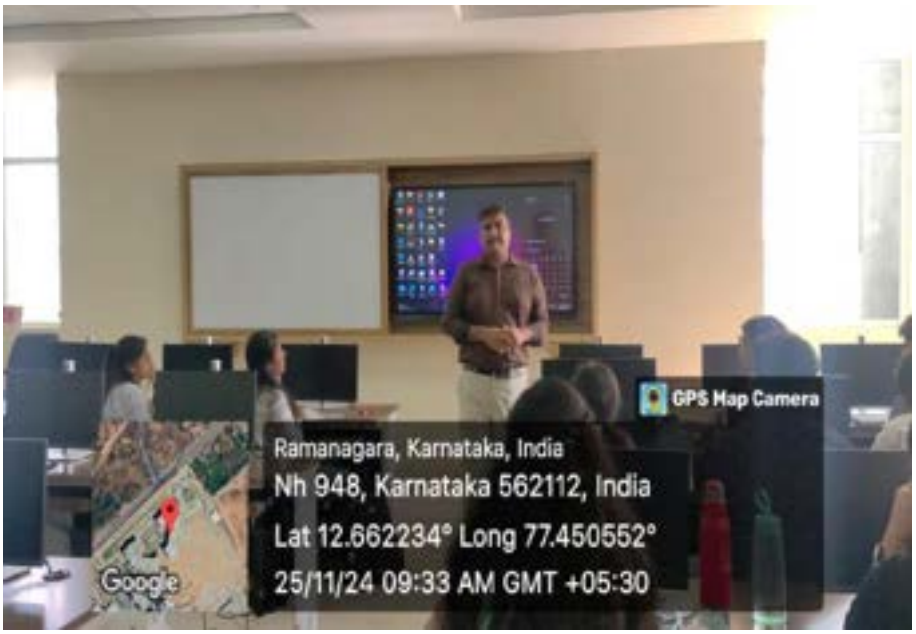
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING (DATA SCIENCE)
HANDS-ON TRAINING: TO BECOME A MICROSOFT AZURE DATA ENGINEER (DP-203)
Microsoft Azure
25th Nov 2024 to 29th Nov 2024
9:30 am to 4:00 pm
A410
Guest Speaker:
Dr. Suresh Arumugam
Register Now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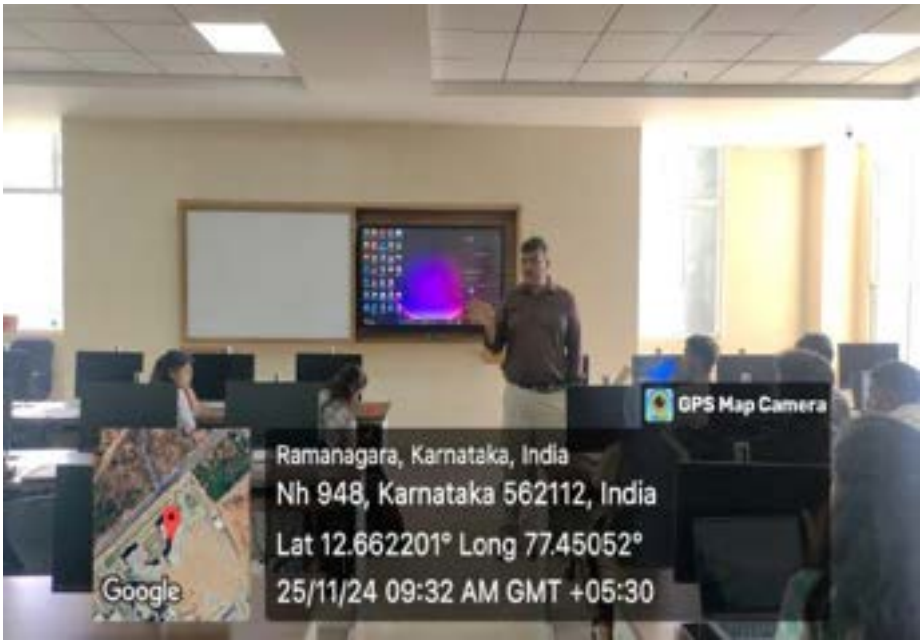

Report on

Thirty Hours Value Added Course
on
" AI and ML in Nursing & Healthcare "

Introduction

The rapid advancements in Artificial Intelligence (AI) and Machine Learning (ML) are transforming industries, with healthcare being one of the most impacted domains. The integration of AI and ML in nursing and healthcare has opened up avenues for improved diagnostics, personalized treatment, operational efficiency, and patient engagement. Recognizing this potential, a 30-hour hands-on training program was conducted from **26th October 2024 to 27th November 2024, from 6:00 PM to 7:00 PM** in Hybrid Mode.

The program, led by **Dr. Shaila SG** and **Prof. Sindhu A** from the Department of CSE (Data Science), with coordination by **Dr. Jamuna P,** School of Nursing aimed to equip participants with foundational and advanced knowledge in AI and ML applications tailored for nursing and healthcare.

This course provided participants with insights into machine learning models, neural networks, data analytics, and the Internet of Things (IoT), along with practical examples and case studies to emphasize the impact of AI in healthcare.

Key Areas Covered in Hands-On Training

1. Introduction to Artificial Intelligence (AI) and Machine Learning (ML)

- **Overview:**
  - Basics of AI and ML concepts, significance, and historical development.
- **Key Takeaways:**
- Difference between AI, ML, and Deep Learning.
- Role of AI in healthcare transformation.

2. Importance and Applications of AI and ML in Nursing & Healthcare

- **Applications:**
- Diagnosis and prognosis prediction.
- Drug discovery.

- Personalized medicine.
- Automation of administrative tasks.
- **Use Cases Discussed:**
- AI-based virtual assistants for patient support.
- ML algorithms for disease prediction using patient history.

3. Types of Machine Learning and its Classification

- **Topics Covered:**
- **Supervised Learning:** Regression and classification tasks.
- **Unsupervised Learning:** Clustering and association.
- **Reinforcement Learning:** Learning through rewards and penalties.
- **Key Techniques Explored:**
- Decision Trees: Classification tasks in healthcare.
- Bayesian Classifier: Probabilistic disease prediction.
- Regression Models: Continuous outcome prediction.

4. Neural Networks, Their Types, and Processing

- **Overview:** Neural Networks and their learning mechanisms.
- **Topics Covered:**
- **Deep Neural Networks (DNNs):** For processing complex data.
- **Convolutional Neural Networks (CNNs):** For medical image analysis.
- **Recurrent Neural Networks (RNNs):** For sequential data processing (e.g., ECG).
- **Natural Language Processing (NLP):** Applications in extracting clinical insights.
- **Advanced Architectures:** Exploration of Transformers, GANs, and other architectures.
- **Computer Vision Applications:** Disease detection from X-rays and MRIs.

5. Internet of Things (IoT)

- **Topics Explored:**
- IoT basics, tools, and process flow in healthcare.
- **Use Cases:**
- Remote Patient Monitoring: Real-time tracking of vitals.
- Smart wearables for health tracking.
- Integration of IoT with AI for efficient data analysis.

6. Data Representation

- **Focus Areas:**
- Understanding data types and data frames.
- Data cleaning: Handling noise and missing values.
- Data standardization and normalization.

7. Data Analytics

- **Overview:**
- Tools such as R and Python for healthcare data analysis.
- **Hands-On Activities:**
- Visualizations using Matplotlib and Seaborn.
- Statistical summaries and hypothesis testing.

8. Healthcare Data Analysis

- **Key Topics:**
- Sources of healthcare data: EHRs, IoT devices, genomic data.
- Pre-processing techniques: De-identification and standardization.

- Data handling for building analysis-ready datasets.

9. Healthcare Datasets - Examples and Case Studies

- **Examples:**
- MIMIC-IV: Intensive care datasets.
- UK Biobank: Genomic and health data.
- **Case Studies Discussed:**
- Early cancer detection using ML.
- AI models for predicting patient recovery outcomes.

10. Case Studies and Future Trends in AI Healthcare

- **Notable Trends:**
- Use of Federated Learning for secure data sharing.
- Integration of AI into telemedicine.
- AI-driven robotics in surgeries.

Learning Outcomes

· Comprehensive understanding of AI and ML applications in healthcare.
· Skills in designing and implementing ML models for medical use cases.
· Insights into managing and analyzing healthcare datasets effectively.
· Familiarity with IoT and its role in remote patient monitoring.

Advantages of Hands-On Training

- **Practical Knowledge:** Hands-on exposure to tools and techniques.
- **Industry Alignment:** Focused on real-world healthcare challenges.
- **Expert Guidance:** Interaction with experienced resource persons.

Conclusion

The training program offered a robust platform to explore AI and ML in the context of nursing and healthcare, emphasizing practical implementation and future trends. It empowered participants with technical expertise and industry-relevant skills, preparing them for innovations in healthcare technology.

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COLLEGE OF NURSING SCIENCES
DAYANANDA SAGAR UNIVERSITY, Harohalli
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Programme Objectives

The objective of this program is to equip participants with foundational knowledge and practical skills in AI and machine learning, enabling them to apply advanced technologies such as neural networks, data analytics, and IoT in nursing and healthcare, ultimately enhancing patient care, operational efficiency, and decision-making through data-driven innovations.

Coordinated by:

- Dr. Jamuna P. P.
  Associate Professor,
  College of Nursing Sciences, DSU.
- Student coordinator: Mrs. Julice Varughese.

Resource Persons

Dr.Shaila S G
Professor & Chairperson
CSE(Data Science)

Transforming Nursing and Healthcare Through AI: Insights, Innovations, and Future Trends

Prof. Sindhu A
Assistant Professor
CSE(Data Science)

A-Block A411 is available both offline and online.

October 26, 2023 - November 27, 2024
Time: 6:00 PM - 7:00 PM

Agenda

Unit No.	Course Content (Topics and Subtopics)	Hours
1	Introduction to AI and ML: Importance and Applications in Nursing & Healthcare	3
2	Types of ML & Classification: Decision Tree, Bayesian Classifier, Regression	2
3	Neural Networks: Learning Models, Deep Neural Networks, CNNs, RNNs, NLP, Computer Vision	4
4	Internet of Things (IoT): Introduction, Process Flow, Tools, Use Cases, Remote Patient Monitoring	3
5	Data Representation: Introduction, Data Frames, Standardization, Handling Noise/Missing Values, Transformation	4
6	Data Analytics: Tools like R, Python, Statistical and Visualization Tools	4
7	Healthcare Data Analysis: Sources, Pre-processing, Handling, Analysis-ready Datasets	5
8	Healthcare Datasets: Examples and Case Studies	3
9	Case Studies and Future Trends in AI Healthcare	2


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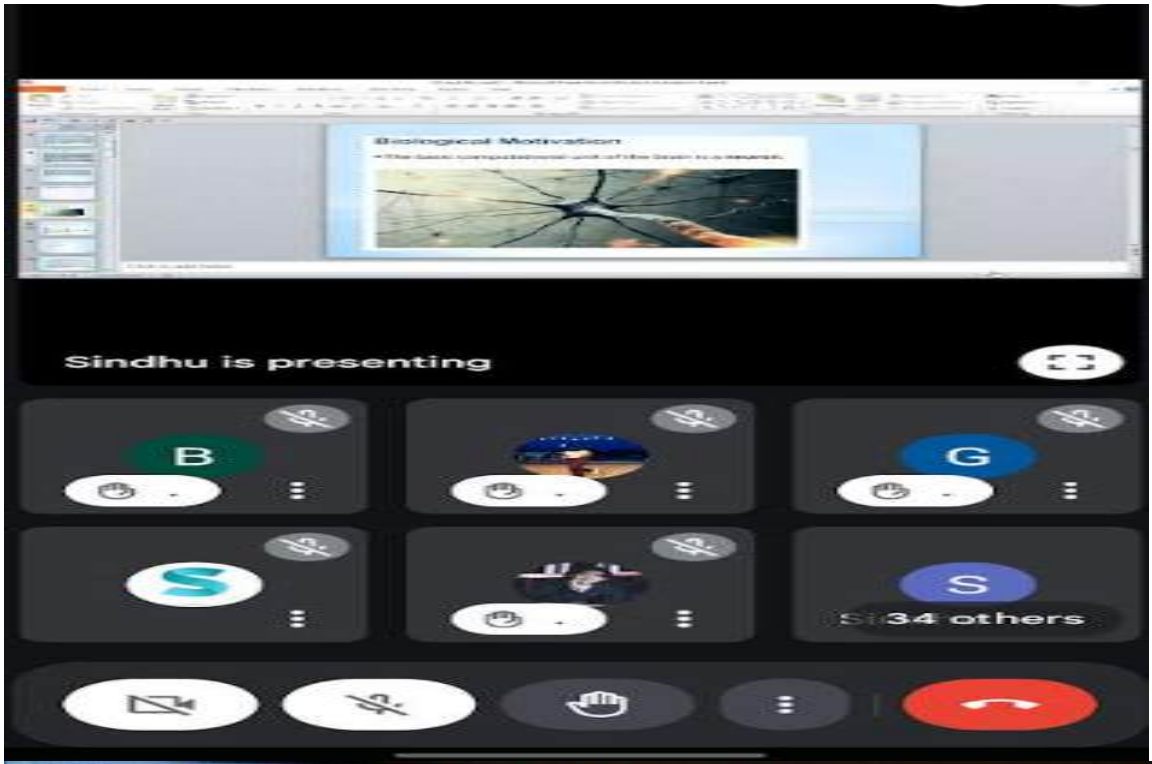
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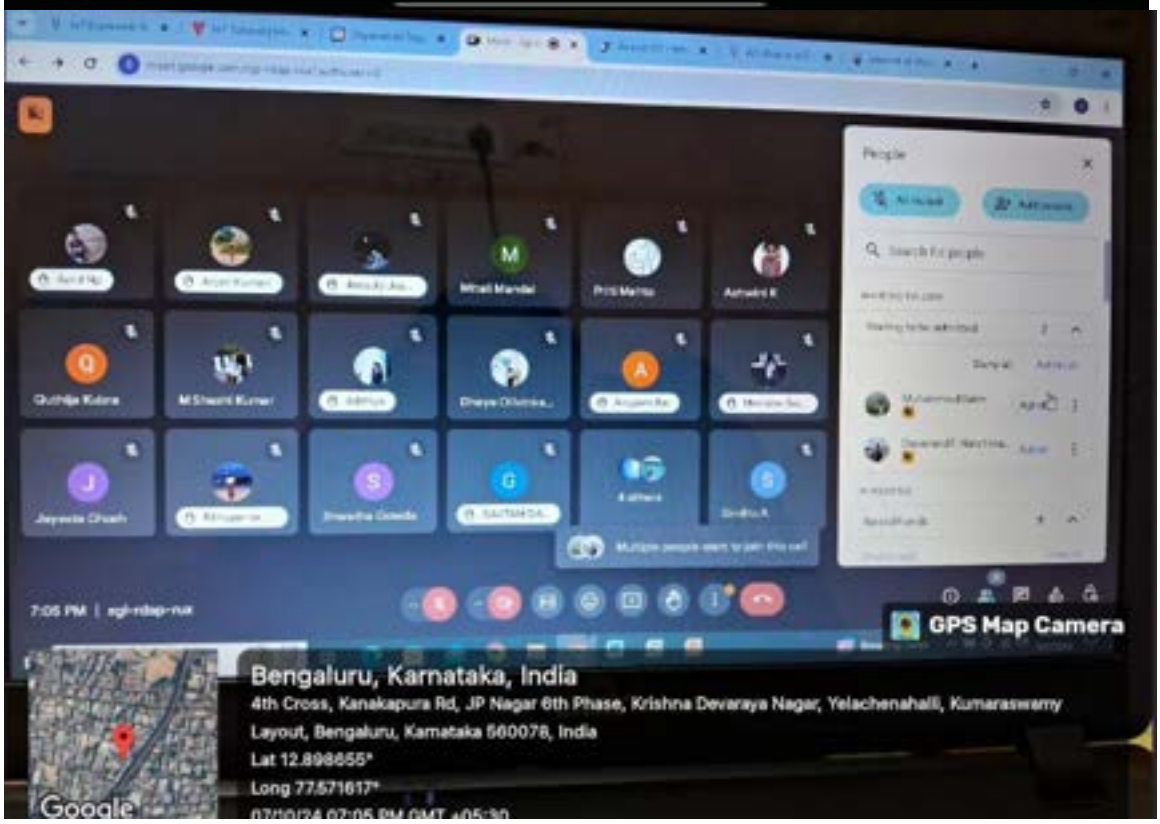
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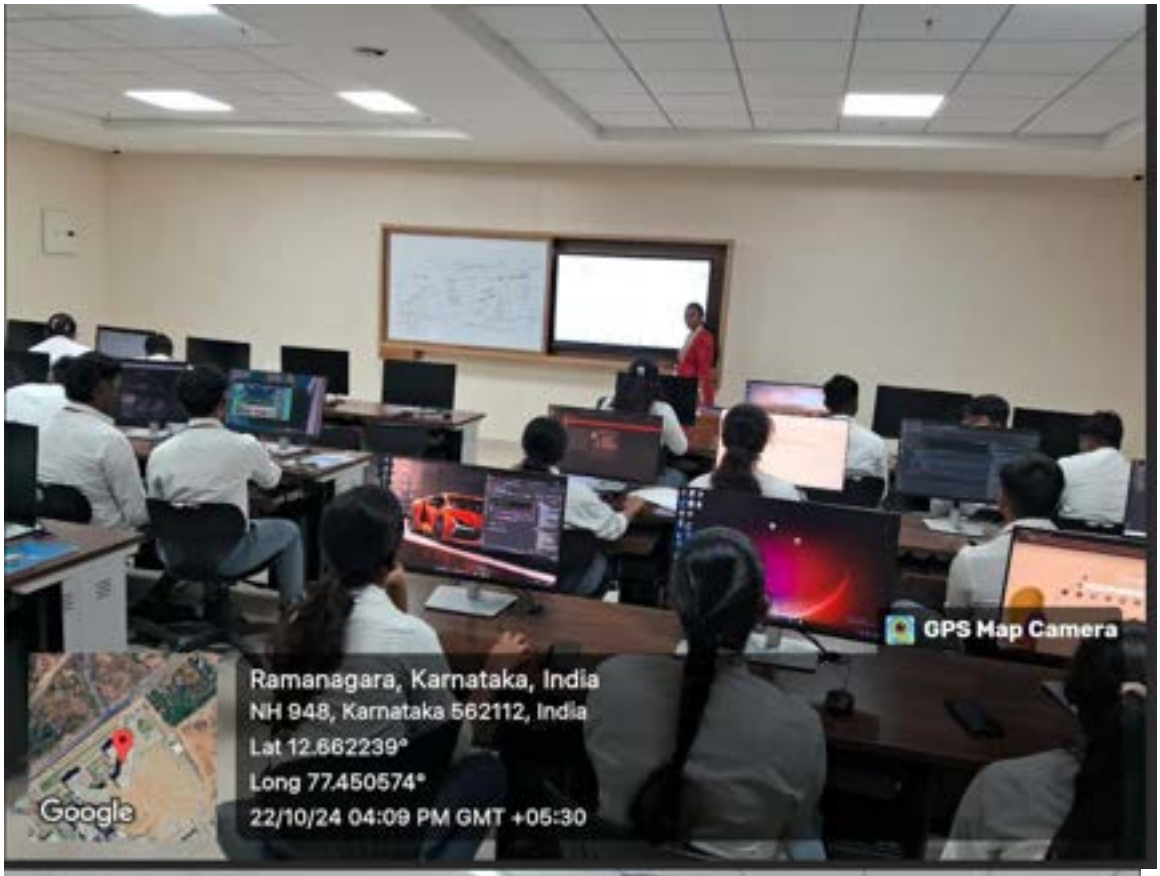
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Report on

Industry Connect Session with Oppo

The Generation Green (Gen G) Campaign, an initiative by OPPO India in collaboration with AICTE and managed by 1M1B, was successfully organized on 10th December 2024 The event featured a vibrant cultural segment with a flash mob, skit, and fashion show, followed by activities like a scavenger hunt, ideathon, and face painting. Distinguished guests, including Syed Khaja Mohiddin M.E - Senior Environmental Officer, KSPCB, and Ms. Anuka Kumar - Head of CSR, OPPO India, graced the inauguration. Esteemed speakers, including the Vice Chancellor and Associate Dean - Dr. Naveen Babu, emphasized the importance of sustainability and innovation.

Post lunch, the event continued with a roundtable discussion where the dean sir, chairpersons of all departments and faculty members shared their ideas on sustainability. They engaged in collaborative discussions with Mr. Syed Khaja Mohiddin M.E. and Ms. Anuka Kumar. During the session, an MoU was signed to promote collaboration in research, organize awareness campaigns, and support initiatives for startups.

Outcome of the event:

The MoU between Oppo and 1M1B will enhance innovation and startup opportunities for DSU students. Additionally, the Government of Karnataka's commitment to support and fund projects from the School of Engineering will provide valuable resources for growth and research, fostering a thriving entrepreneurial ecosystem at DSU.

Report on
Smart India Hackathon (SIH) 2024

The Smart India Hackathon (SIH) is an annual innovation challenge organized by the Government of India to provide students with a platform to solve real-world problems. SIH 2024 encouraged participants to apply their creativity and technical expertise to develop innovative solutions for societal, industrial, and governmental challenges. The program was held on 12th December 2024 . Three students Janardhan, Sujeeth & OM Singh along with Mentor Prof. Manjula were participated in SIH 2024.

Development of innovative solutions to real-world problems faced by industries, government bodies, and society.

Creation of working prototypes and ideas that have the potential for real-world

deployment.

Addressed challenges in diverse domains such as healthcare, education, agriculture, environment, transportation, and smart cities.

- Participation in SIH 2024 provided the following key takeaways:
- Enhanced technical skills in [specific areas, e.g., AI, IoT, or web development].
- Real-world problem-solving experience with industry-standard tools and practices.
- Improved teamwork, leadership, and communication skills.
- Exposure to working under time constraints in a competitive environment.

Participating in the Smart India Hackathon 2024 was a transformative experience for our team. It provided a unique opportunity to contribute to solving real-world problems, fostered technical growth, and inspired us to innovate further. We look forward to applying these learnings in future endeavors to make a positive impact on society.


#SIH Software Edition
GRAND
FINALE 2024
SMART INDIA

Report
on
TECHSPARK MATLAB EXPO 2024

The DataScience@DSU Club, the Department of CSE (Data Science) & IEEE student Chapter-Information Theory Society organized **TECHSPARK MATLAB EXPO 2024** held on 24th December 2024, from 10:00 AM to 03:00 PM in A410, SOE, DSU, organized by Dr. Shaila S G, Professor and Chairperson (DS), Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science), and Prof. Monish L, Assistant Professor, Dept. of CSE (Data Science). More than 50+ students have registered and participated in the event.

Details of the Resource Person:

- ***Dr. Debanand Singdeo, works as Senior Engineer in the Education Team at MathWorks India Private Limited (Bangalore)***
- *Mr. Rakshith B S is the Senior Application Engineer for MathWorks products at CoreEL Technologies, Bengaluru*

The resource persons officially inaugurated MATLAB EXPO at DSU, marking the beginning of the event. The program commenced with a warm welcome to the experts, followed by addresses from the dignitaries, who spoke to the assembled audience. The event concluded with students enthusiastically participating in and enjoying their MATLAB learning experience

The primary objective is to inspire creativity by showcasing how MATLAB can be used to develop future-ready solutions and enhance productivity in academic and industrial applications.

Objectives:

- **Showcase Innovation:** Highlight the innovative use of MATLAB to solve real-world problems through creative projects.
- **Promote Knowledge Sharing:** Provide a platform for students and professionals to share their knowledge and expertise in MATLAB programming and applications.
- **Encourage Collaboration:** Foster teamwork and collaboration by involving participants from various disciplines in project development.
- **Enhance Technical Skills:** Provide participants an opportunity to enhance their programming, modeling, and simulation skills using MATLAB.


DAYANANDA SAGAR UNIVERSITY
MathWorks
INSTITUTION'S INNOVATION COUNCIL
CoreEL Technologies
School of Engineering
Devarakaggalahalli, Harohalli, Kanakapura Road
Ramanagara Dt., Bengaluru – 562 112
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)
In association with
IEEE ITS, MathWorks & CoreEL Technologies
is Organising
TECHSPARK MATLAB EXPO 2024
Date:
24TH DEC 2024 @ 10:00 am to 3:00 pm
Experts:
• Dr. Debanand Singdeo
Senior Engineer, Education Team at MathWorks
• Mr. Rakshith B S, Senior Application Engineer
for MathWorks CoreEL Technologies
Venue:
A410, A Block, Harohalli, DSU
Conveners:
Dr. Amit Bhatt
Vice Chancellor, DSU
Dr. Udaya Kumar Reddy KR
Dean, SoE
Dr. Naveen Babu
Assoc. Dean, SOE
Dr. Shaila S G
Chairperson, Dept. of CSE (DS)
Organizers:
Prof. Shivamma D
Assistant Professor
Prof. Monish L
Assistant Professor
Dept. of CSE(DS)
Student Co-ordinators
Nitin Prajwal R
Janardhan K S
Pavan Kumar


GPS Map Camera
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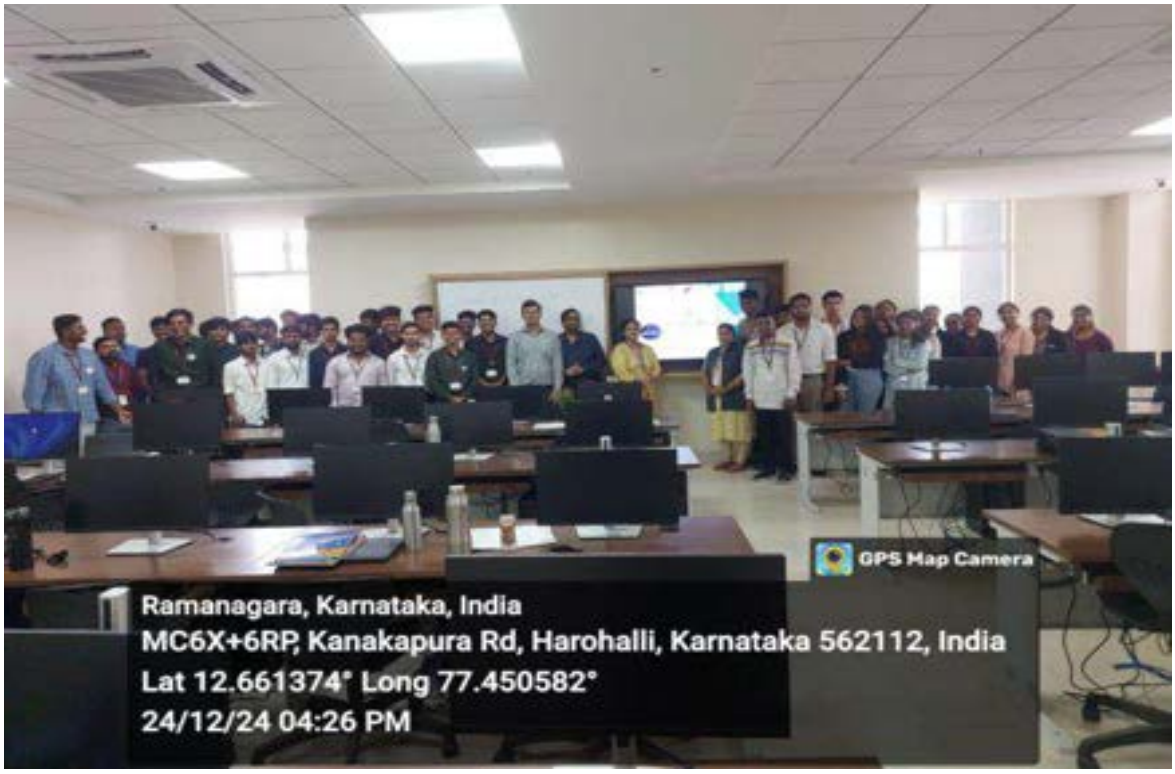
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Report
on

Ideaverse'25

The IDEAVERSE'25 of Dept. of CSE (Data Science), Information Theory Society (ITS) Student Chapter was held on 20th February, 2025, at 9:00 AM to 4:20 PM at the LH 2 & 3 'A Block' Ground Floor SOE. This highly anticipated event was organized by the Department of Computer Science and Engineering- (Data Science), School of Engineering, in collaboration with the IEEE Information Theory Society (ITS). **IdeaVerse'25** aims to foster innovation, creativity, and problem-solving among participants by providing a dynamic platform for idea exchange. The event encourages collaboration between students, faculty, and industry experts to address real-world challenges through technological solutions. It aspires to inspire, nurture young minds in enhancing their critical thinking and research skills. The ceremony was led by key organizers, including **Dr. Shaila S G**, Chairperson of the CSE (Data Science) Department, Dr. Pavan Kumar U, Faculty Advisor IEEE ITS Student Branch, DSU and Prof. Prapti Bhattacharjee, Faculty Coordinator of the IEEE ITS Student Branch at DSU. The event was further supported by the leadership of Dr. Pushpa Mala S, the IEEE Student Branch Counsellor, and Dr. Arun Balodi, Faculty Advisor of IEEE SPS and MTTS, DSU. The student committee played an integral role in managing the event, with Nitin Prajwal R - Chair of IEEE ITS, Pavan Kumar G - Vice-Chair, Janardhan KS - Secretary, and other IEEE ITS members taking the lead in student coordination. The chief guest of the event was **Dr. Kishore Kumar Pedapenki**, a Senior Member of IEEE and an Associate Professor at Jain University, Bangalore. His presence greatly enriched the occasion, as he shared his extensive experience and deep expertise in the field of technology and research, making his address one of the most impactful moments of the event.

The first round of evaluation, the top six teams were officially announced based on their creativity, feasibility, technical proficiency, and impact. The jury panel recognized the outstanding projects that stood out in terms of innovation and problem-solving approach. After the announcement, a memento presentation was conducted to honor the jury members and distinguished guests for their valuable contributions. The session concluded with encouragement for the selected teams as they prepared for the final presentation round. After the final presentations, the jury panel carefully evaluated the top six teams based on their technical execution, innovation, feasibility, and overall impact. Following deliberation, the top three winners of IdeaVerse'25 were officially selected and announced. The prize distribution ceremony honoured the winning teams with certificates, and Cash Prize, recognizing their outstanding contributions to problem-solving and technological innovation. The event concluded with applause and encouragement, celebrating the participants' dedication and inspiring them to continue their journey in research and innovation.


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Winner Board


Winner Board

Report
on

ServiceNow Placement Training

ServiceNow Placement Training conducted by Placement Cell, DSU was held from 24th February, 2025 to 27th February, 2025 at the LH 2 'A Block' Ground Floor SOE from 9:00 AM to 4:20 PM by **Prof. Manjula M**, Assistant Professor, Dept. of CSE (Data Science)

ServiceNow Administration Fundamentals course is a comprehensive three-day training program designed to equip participants with the essential skills required to effectively manage and configure the ServiceNow platform. To bridge the gap between training and employment, ServiceNow collaborates with global and regional placement partners. These partnerships are committed to training individuals in ServiceNow skills as part of the "RiseUp with ServiceNow" initiative. This initiative aims to create opportunities for individuals to develop relevant skills and secure employment in the IT service management industry.

Course Overview:

1. **User Interface & Navigation:** Mastering platform navigation, customizing list and form views, and personalizing the user experience.
2. **Collaboration:** Utilizing tools like work notes, additional comments, and connect chat to enhance task collaboration.
3. **Database Administration:** Managing user accounts, security roles, form designs, list layouts, databases, and tables.
4. **Process Automation:** Creating and managing workflows, configuring notifications and tasks, and handling business rules and scripts.
5. **Reporting & Analysis:** Developing reports and dashboards, leveraging performance analytics, and interpreting data to support decision-making.

Upon completing the course, participants are eligible to take the **ServiceNow Certified System Administrator (CSA) exam.** This certification validates their proficiency in ServiceNow system administration and serves as a foundational credential for advanced certifications.


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Report
on

Career Guidance and Pre-Placement Training

The DataScience@DSU Club, the Department of CSE (Data Science), organized ***"Career Guidance and Pre-Placement Training"*** held on 28th February, 2025, from 10:40 am – 12.20 pm in A440, SOE, DSU, organized by **Dr. Shaila S G**, Professor and Chairperson (DS), **Prof. Shivamma D**, Assistant Professor, Dept. of CSE (Data Science), and **Prof. Monish L**, Assistant Professor, Dept. of CSE (Data Science). More than 50+ students have been registered and participated in the event.

Resource Person:

Mr. VijayKumar, Placement Director, SOE, DSU

Mr. Girish, Manager, CTS, SOE, DSU

Objectives

The objectives of the pre-placement talk include:

1. Improved understanding of industry expectations and recruitment processes.

2. Practical tips on resume building and interview preparation.

3. Awareness of essential cognitive and technical skills.

4. Interactive discussions and expert guidance.

5. Increased confidence for placement opportunities.

Key Takeaways

The key takeaways from the Career Guidance and Pre-Placement Training session included the importance of aligning students' skills with industry expectations and understanding the requirements of the placement process. The session emphasized effective strategies for resume building and interview preparation, highlighting the need for clear communication and professional presentation. Students gained insights into the critical role of cognitive and technical skills in shaping their career success and learned the importance of continuous learning and self-improvement to stay competitive in the job market. Overall, the session equipped students with practical knowledge and boosted their confidence for future placement opportunities


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Report on

"Tuberculosis Aweness drive"

The Department of student affairs organized **"Tuberculosis Aweness drive"** held on 23rd April 2025, from 10:00 AM to 02:00 PM at **M. Maniyambal**, Kanakapura Road, with the support of Dr. Shaila S G, Professor and Chairperson (DS), Dr. Santhosh Kumar G, Associate Professor, Dr. U. Pavan Kumar, Prof. Prapti B, Assistant Professor , Mr. Kiran Kumar H L Dept. of CSE (Data Science). Dr. K.S. Bhagyajyothi, Asst. Director Physical Education, DSU, supported to complete the program successfully.

Tuberculosis (TB) remains a major public health concern worldwide, particularly in developing countries. To combat the spread of TB and promote early detection and treatment, The event aimed to educate the community about TB prevention, symptoms, and treatment options.

Objectives

- Raise awareness about tuberculosis causes, symptoms, and prevention.
- Encourage early diagnosis and treatment adherence.
- Reduce stigma associated with TB.
- Promote government health schemes and free treatment facilities.

Target Audience

The program targeted a diverse audience including:

- Local residents
- Office workers

Program Activities

The event consisted of various activities aimed at raising awareness and fostering active participation:

- A health expert delivered a presentation on TB transmission, symptoms (persistent cough, fever, weight loss), and treatment.
- Emphasis was placed on the importance of completing the full course of medication to prevent drug-resistant TB.

Outcome of the Program

- Increased awareness & Knowledge
- Behavioral Impact & Stigma Reduction
- The TB Awareness Drive successfully improved knowledge, encouraged early testing, and reduced stigma. Sustained efforts will help move closer to a **TB-free community**.
- Encouraged participants to adopt healthier lifestyles.


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Report
on

Fractal Analytics Corporate Training Program

The Fractal Analytics corporate training program, organized and delivered **by Dr. Suresh Arumugam,** Associate Professor at Dayananda Sagar University, successfully generated funding of **₹56,000**. This 14-hour intensive course focused on building practical skills in Azure Data Factory, Synapse Analytics, Databricks, and Azure Cognitive Services. The program was designed to provide 60% hands-on learning, ensuring participants gained real-world, practical experience. The training commenced with an Introduction to Azure & Azure Data Factory (4 hours). Participants were introduced to Azure's cloud services, resource management, security basics, and then given a comprehensive overview of Azure Data Factory (ADF). A hands-on lab enabled them to build ETL pipelines, connecting Azure SQL Databases and Blob Storage, and performing data transformations using ADF's Mapping Data Flows.

Next, Azure Synapse Analytics (4 hours) covered the basics of Synapse, exploring its SQL and Spark pools, and distinctions between dedicated and serverless options. During practical sessions, participants provisioned a Synapse workspace, loaded and queried data, created external tables, and integrated Synapse with Power BI for data visualization. The program then transitioned to Azure Databricks (3 hours). After understanding Databricks' architecture and Lakehouse concepts, learners engaged in hands-on exercises to process big data using PySpark notebooks, showcasing the integration with Azure Data Lake and Delta Lake technologies.

Finally, Azure Cognitive Services (3 hours) introduced Microsoft’s suite of AI-powered services. Participants implemented text analytics for sentiment analysis, extracted text from images using OCR, and developed speech-to-text transcription models through guided lab activities. Overall, this highly focused corporate training not only enhanced participants' technical skills in cloud-based ETL, big data processing, and AI integration but also achieved strong practical outcomes thanks to its lab-heavy structure. Dr. Suresh Arumugam's expertise and well-structured delivery played a crucial role in the program’s success.

Report
on

Parents Teachers Meeting

The PTM was inaugurated by Dr. Shaila SG, Professor and Chairperson, Dept. of CSE (Data Science) on 26th February 2025 Prof. Shivamma D, Class Advisor of 4th Sem A section, Prof. Godhandaraman T, Class Advisor of 4th Sem B section, Prof. Monish L, Class Advisor of 6th semester A Section, Prof. Manjula M, Class Advisor of 8th semester along with other faculties were present in the department. Around 40 parents were joined in the meeting. Chairpersons followed by the class advisors took up the agenda points listed below

Agenda:

Welcoming parents, class advisor information (name, designation, contact number, email id)

1. Discussion on effect of less attendance:
2. Minimum attendance requirement 85%
3. Detaining policy for not meeting the attendance requirements- not allowed for SEE exams
4. Inform about remedial classes conduction for slow learners/performers.
5. Upcoming examination MSE2
6. Discussion on placement: Best Practices: Adopted project-based learning, carrier guidance.
    - Inform about CTS learning.
    - Show the marks secured by student in MSE I
    - Show the results of Previous semester.
    - Show the Attendance status of the student.
    - Current status of 7th semester placement

On going placement training for 5th and 3rd semester and future plans

Opinion of the parents:

- ✔ Parents were well satisfied by the Institution and its policies. The parents congratulated the department for its achievements.
- ✔ Parents suggested to keep the online classes on Saturdays as they are facing it difficult to attend on Saturday.
- ✔ Parents also requested to provide them access with credentials to them.

Report
on

Hands-on workshop on Industrial IoT for Automation

The DataScience@DSU Club under the IEEE Information Theory Society student chapter, Department of CSE (Data Science) organized Hands-on workshop on "**Industrial IoT for Automation"** held on 10th, 11th, and 12th March 2025. Organized by **Dr. Shaila S G**, Professor and Chairperson (DS), **Prof. Mahendra M K**, Assistant Professor, and **Prof. Chandrakala L**, Assistant Professor and student volunteers for their support. More than 150+ students have participated in this Workshop.

Resource Persons:

- **Mr. Mahesh Deginal**, (Manager and CEO of karunadu Technologies Pvt Ltd)
- **Mr.harish** (CTO and Co-Founder of karunadu Technologies Pvt Ltd.)
- **Mr.Nithesh Kumar** (Software Engineer of Karunadu Technologies Pvt.Ltd)

Introduction:

The Hands-on Workshop on **Industrial IoT for Automation**, held over three days, provided participants with a practical and immersive learning experience in electronics and sensor-based applications. Through a series of interactive sessions, attendees explored the fundamentals of hardware components such as LEDs, buzzers, digital displays, and various sensors. Guided activities focused on circuit design, microcontroller programming, and IoT integration, enabling participants to control electronic components, work with display modules, and collect real-time data. Each session built upon the previous one, reinforcing key concepts while fostering problem-solving and innovation. The workshop proved to be a valuable opportunity for skill development and hands-on experimentation in the field of industrial automation.

Objectives:

- Introduce participants to the **fundamentals of IoT in industrial automation**, focusing on practical applications.
- Enable **hands-on experience** in **controlling LEDs, buzzers, and digital displays** through microcontroller programming.
- Teach participants how to **interface and program various sensors** (light, temperature, ultrasonic, infrared, humidity, etc.) for real-time data collection.
- Guide attendees in implementing **sensor-based automation**, such as triggering alerts, controlling devices, and monitoring environmental conditions.
- Develop skills in **displaying sensor readings on LCD screens and serial monitors** for better data interpretation.
- Explore techniques for **wireless data transmission and cloud integration** using ESP modules.
- Encourage problem-solving by challenging participants to **design and execute small IoT projects** related to industrial automation.

Outcomes:

1. **Hands-on Experience:** Participants gained practical skills by working with microcontrollers, sensors, and automation techniques, enabling them to build and troubleshoot IoT-based systems.
2. **Project Development:** Many participants developed project ideas or prototypes during the workshop, which can be expanded into real-world applications in the future.
3. **Mini-Project Opportunities:** Problem statements introduced during the workshop can be pursued as mini-projects in upcoming semesters, fostering continued learning and innovation.
4. **Sensor Integration:** Participants learned to integrate multiple sensors (e.g., temperature, ultrasonic, infrared) to create interactive and automated systems, enhancing their understanding of IoT applications.


SCHOOL OF ENGINEERING
PRESENTS
INDUSTRIAL IoT FOR
AUTOMATION
In Association With Karunadu Technologies Pvt.Ltd,
10th to 12th
March, 2025


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HAT is IOT
Things is the network of physical
ntain embedded technology to
and sense or interact with their internal
xternal environment." Gartner
A network of physical objects that
interact with each other to share
information and take action
The term was first proposed by K
Ashton in 1999
IOT first became popular at the
center,MIT.
Internet of things
Everyday things
get connected
Cloud Services
IoT
Things
Everyday things
Smart homes & cities
adu Technologies Pvt. Ltd.
10 March 20


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Report
on

Awareness Program on World Health Day

The DataScience@DSU Club, the Department of CSE (Data Science) organized awareness program on **"Awareness Program on World Health Day"** held on 07th April 2025, from 10:00 AM to 02:00 PM at **T. Hosahalli**, Kanakapura Road, organized by Dr. Shaila S G, Professor and Chairperson (DS), Dr. Santhosh Kumar G, Associate Professor, Dr. U. Pavan Kumar, and Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science). Dr. K.S. Bhagyajyothi, Asst. Director Physical Education, DSU, supported to complete the program successfully.

World Health Day is celebrated globally on 7th April every year to raise awareness about health and well-being. An awareness program to educate participants on the importance of health, preventive measures, and healthy lifestyle choices.

Objectives

The primary objectives of the awareness program were:

- To spread awareness about global and local health issues.
- To promote healthy habits such as balanced nutrition, physical activity, and mental well-being.
- To encourage preventive healthcare and regular medical check-ups.
- To highlight the importance of universal access to healthcare.

Target Audience

The program targeted a diverse audience including:

- Local residents
- School students
- Office workers

Program Activities

The event consisted of various activities aimed at raising awareness and fostering active participation:

- To spread awareness about global and local health issues.
- To promote healthy habits such as balanced nutrition, physical activity, and mental well-being.
- To encourage preventive healthcare and regular medical check-ups.
- To highlight the importance of universal access to healthcare.

Outcome of the Program

- Increased awareness about preventive healthcare.
- Positive feedback from participants regarding free check-ups and expert advice.

❖ Encouraged participants to adopt healthier lifestyles.


Dayananda Sagar
University


CDSIMER
Dayananda Sagar

Report
on

Awareness Program on Water Conservation

The DataScience@DSU Club, the Department of CSE (Data Science) organized awareness program on **"Awareness Program on Water Conservation"** held on 08th April 2025, from 10:00 AM to 02:00 PM at T. Hosahalli, Kanakapura Road, organized by Dr. Shaila S G, Professor and Chairperson (DS), Dr. Santhosh Kumar G, Associate Professor, Dr. U. Pavan Kumar, and Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science). Dr. K.S. Bhagyajyothi, Asst. Director Physical Education, DSU, supported to complete the program successfully.

Water conservation has become an urgent priority due to the increasing global water crisis. As water scarcity intensifies in many regions, raising awareness about efficient water use is crucial. An Awareness Program on Water Conservation was organized to educate individuals on the significance of conserving water and to encourage practices that reduce water wastage in daily life.

Objectives

The primary objectives of the awareness program were:

- To educate the community about the importance of water conservation.
- To promote sustainable water use practices in households, schools, and workplaces.
- To demonstrate practical methods of reducing water wastage.
- To engage participants in discussions about local water challenges and solutions.

Target Audience

The program targeted a diverse audience including:

- ❖ Local residents
- ❖ School students
- ❖ Community leaders
- ❖ Environmentally conscious groups and activists
- ❖ Office workers

Program Activities

The event consisted of various activities aimed at raising awareness and fostering active participation:

Interactive Presentations: Experts in environmental science and water management delivered presentations on the global water crisis, water scarcity issues, and the importance of sustainable water practices.

Workshops: Practical workshops were organized to teach techniques such as rainwater harvesting, reducing water usage in daily activities (e.g., shorter showers, fixing leaks), and using water-efficient appliances.

Posters and Flyers Distribution: Informational material, including posters and flyers, highlighting the importance of water conservation and simple water-saving tips were distributed throughout the community.

Outcome of the Program

Increased Awareness: Participants gained a deeper understanding of the global water crisis and the direct impact of their daily actions on water resources.

Adoption of Water-Saving Practices: Many attendees pledged to adopt water-saving practices, such as reducing shower time and fixing leaks at home.


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Report on **TechTalk**

On

NEXTGEN ORACLE - R&D CONNECT

The Department of Computer Science and Engineering (Data Science) successfully organized the TechTalk: NextGen Oracle - R&D Connect on 9th April 2025, an engaging and insightful event held at LH2, A-Block, School of Engineering (SOE). The event, which took place from **10:00 AM to 4:00 PM**, brought together tech enthusiasts, students, and professionals for a deep dive into Oracle's groundbreaking research and development efforts. The session was a resounding success, with participants gaining invaluable knowledge and networking with industry leaders.

The event was graced by two eminent speakers from Oracle:

Ashutosh Naik, Director of Software Development at Oracle

N. Naveen Kumar, Senior Member of Technical Staff (MTS), R&D at Oracle

The TechTalk was attended by a diverse group of participants, including **students** and **faculty.** The interactive sessions and Q&A rounds allowed attendees to ask questions directly to the experts, gaining more clarity on technical topics and discussing the future impact of Oracle's innovations.

Organizers and Coordination

The event was meticulously organized by the following faculty members of the Department of CSE (Data Science):

- **Prof. Manjula M**, **Prof. Sindhu A**, **Dr. Suresh Arumugam Prof. Godhandaraman T**

Objective:

- **Introduce emerging trends** in Oracle's R&D, including AI, cloud computing, and data science.
- **Enhance participants' technical knowledge** through expert-led sessions and real-world case studies.
- **Foster industry-academia collaboration** by facilitating interaction with experienced professionals from Oracle.
- **Encourage innovation and research orientation** among students in the field of next-generation technologies.

Workshop Outcomes:

- Participants gained in-depth insights into Oracle's cutting-edge research and development practices.
- Key technological domains such as cloud computing, artificial intelligence, data science, machine learning, and database systems were explored in detail.
- Exposure to Oracle's internal R&D strategies helped bridge the gap between academic learning and real-world enterprise solutions.

Conclusion

The **TechTalk: NextGen Oracle - R&D Connect** was a highly successful event, offering invaluable insights into Oracle's cutting-edge research and development efforts. Participants left the event with a deeper understanding of the technological advancements shaping the future of software development and data science. The workshop saw active participation from students and faculty members from the Department of CSE (Data Science), with a total of 150+ participants attending the session. The interactive nature of the session provided participants with ample opportunities to clarify their doubts and enhance their understanding of data science methodologies.


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TECH TALK
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Report

On

Alumni Tales: A Data Science Journey

The Department of CSE (Data Science) successfully organized an *Alumni Meet & Talk* titled **"Alumni Tales: A Data Science Journey"** on **6th May 2025**. The event was organized by **Prof. Shivamma D, Prof. Monish L, and Prof. Prapti Bhattacharjee**, and was attended by students of the 4th and 6th semesters. The talk featured alumni from the department's first batch (2020-24), who shared their unique professional journeys, offering valuable insights and motivation to the current students.

The session began with a warm welcome by **Dr. Shaila S G**, Professor & Chairperson of the Department, who set a nostalgic tone by sharing fond memories of the very first batch of the Dept. This was followed by a talk from **Rahul Srikanth**, Technical Product Manager at EY, who delivered a detailed presentation on the roles and responsibilities of a project manager in the industry, focusing on leadership, coordination, and strategy.

Next, **Ayesha Malaika**, Chief Operating Officer at Acolyteai.in, inspired the audience with her journey of finding purpose and staying committed to one's goals, even when the path is unclear. Her insights offered encouragement to students still exploring their career directions.

The final speaker, **Varun N**, Marketing Team at Acolyteai.in and also a multifaceted artist now working as a screenwriter, director, and actor, brought an energetic close to the session. He spoke passionately about following one's creative instincts and emphasized how important it is to stay true to one's passion, even beyond the tech domain.

The event served as both an informative and emotionally resonant experience for current students, offering them a glimpse into the varied and inspiring journeys of their seniors.

At the end of the talk an evaluation was carried out and the students submitted the feedback.

The Takeaways of the event are:

- Students got to understand the real-world role of a project manager from an industry expert.
- They heard firsthand how finding one's path takes time and self-belief.
- They were inspired by a senior who pursued creative passions beyond tech.
- They saw how diverse and successful the first batch's career paths have been.
- Overall, students left motivated and encouraged by the alumni journeys.

Event Photographs:


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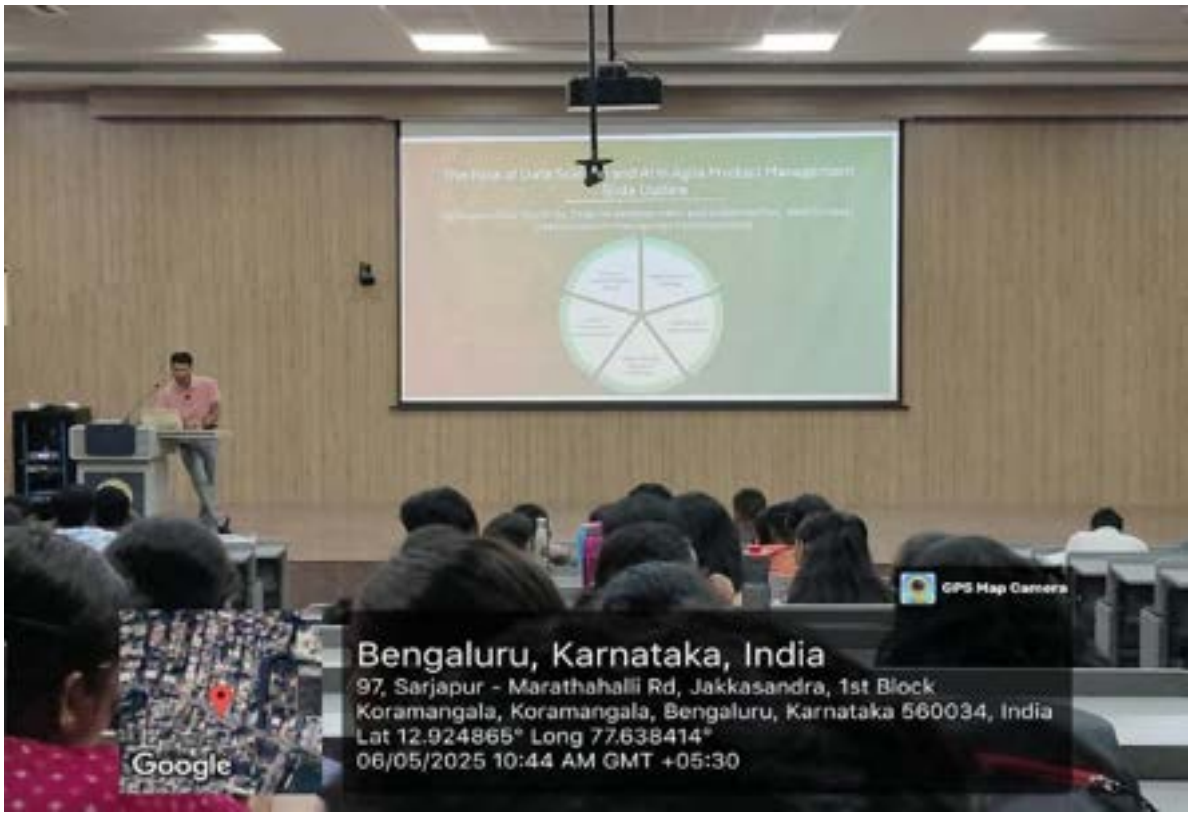
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Report
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Advance Your Career Through MS/MBA Programs in Germany

The Department of CSE (Data Science) successfully organized a session on "Advance Your Career Through MS/MBA Programs in Germany" on 20th May 2025. The event was held in collaboration with the Office of International Affairs, DSU, and was coordinated by **Dr. Shaila S G**, Professor and Chairperson, Department of CSE (DS), along with Prof. Shivamma D and Prof. Monish L. The session witnessed active participation from students of the 4th and 6th semesters, who showed keen interest in exploring higher education opportunities in Germany.

Resource Persons: Dr. Manjula Mundakana Senior Advisor, Science Technology & Political Affairs, German Consulate Bangalore

Dr. Manjula Mundakana, Senior Advisor for Science, Technology, and Political Affairs at the German Consulate in Bangalore, delivered an insightful talk highlighting the evolving Indo-German collaboration in science, technology, and research. She emphasized her role in facilitating visits of German scientific, business, and political delegations to Karnataka and Kerala, fostering meaningful partnerships with Indian institutions. Her talk shed light on how these engagements strengthen bilateral cooperation and create opportunities for innovation and knowledge exchange.

She also guided students and researchers on navigating the German education and research landscape, explaining various higher education opportunities, scholarships, funding programmes, and career prospects in Germany. Dr. Mundakana encouraged young professionals to explore global research networks and outlined pathways to study, collaborate, and work in Germany. Her talk inspired the audience to actively engage in international scientific collaborations and benefit from Germany's robust research ecosystem.

Key outcome:

1. Participants gained a clear understanding of Germany's education and research ecosystem, including funding and scholarship opportunities.
2. Students and researchers received valuable insights into studying, working, and collaborating in Germany.
3. The talk sparked enthusiasm for Indo-German academic and scientific exchange programs.
4. Attendees were encouraged to build connections through Indo-German research networks and consular support.


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Report
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Industry Conclave on Curriculum Development

The Department of CSE (Data Science) at Dayananda Sagar University, in association with the Placement Team, organized a Curriculum Review Meeting on 23rd May 2025. The event was coordinated by **Dr. Shaila S G,** Professor and Chairperson, **Ms. Shivamma D**, Assistant Professor, **Mr. Monish L**, Assistant Professor, **Dr. Suresh Arumugam**, Associate Professor, and Mr. Vijaykumar, Director – Placements. The meeting was well-attended by all faculty members and students of the department. The primary objective was to evaluate and enhance the current B.Tech in Data Science curriculum to ensure its alignment with evolving industry demands. The session featured expert insights from distinguished industry leaders, who shared perspectives on current technology trends, essential workforce skills, and strategic directions for curriculum enhancement, thereby strengthening the industry-academia interface.

The invited guests included **Mr. Pramod M. V**., University Liaison & Early Career Engagement at LTIMindtree, known for his contributions to campus engagement and leadership development; **Mr**. **Vinayak Pai**, Associate Vice President – Data & Analytics BU, LTIMindtree, a seasoned leader with expertise in Generative AI and Lakehouse architectures; and **Ms. Mamatha Shanmugam,** Senior Director – Financial Services at Capgemini, with deep experience in technology delivery, DevOps, and cloud solutions.

Several key curriculum integration suggestions were proposed during the session. These included adopting Python as the primary programming language across courses, replacing R where necessary, and integrating Generative AI tools like GitHub Copilot and Power BI Copilot into labs and projects. The experts stressed the importance of promoting end-to-end project development using AI and automation tools, and making Ethical AI a mandatory subject from the 6th semester onwards. They also recommended the introduction of Big Data Engineering topics using platforms such as AWS, Azure, GCP, Snowflake, and Databricks, along with clubbing Supply Chain Analytics and Risk Analytics under domain electives.

Additionally, the Cognitive and Technical Skills (CTS) course should be restructured to enhance students' communication, technical, and team collaboration capabilities. To further align academic learning with industry standards, the inclusion and encouragement of Global Certifications were advised in the domains of Cloud (AWS, Azure), AI/ML, DevOps & Agile, Data Analytics (Power BI, Tableau), and Cybersecurity.

The review session concluded with a shared understanding of the urgent need to bridge the gap between academia and industry by embedding emerging technologies, practical learning, and ethical responsibility into the curriculum. The department has resolved to begin implementing the suggested updates to enhance the employability and skill set of students pursuing B.Tech in Data Science.

DAYANANDA SAGAR UNIVERSITY

NAAC GRADE A+

SCHOOL OF ENGINEERING

INDUSTRY CONCLAVE ON CURRICULUM DEVELOPMENT

ENGAGING FUTURE TALENT

Vinayak Pai

Vinayak Pai leads **LTIMindtree's Center of Excellence**, architecting Generative AI governance and Lakehouse solutions with 26+ years in data leadership. A NASSCOM speaker and mentor, he drives global initiatives like supply chain analytics and data migrations while building AI systems with high-performance teams.

Save the date

Begins May 23

2025


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INDUSTRY CONCLAVE ON CURRICULUM DEVELOPMENT
ENGAGING FUTURE TALENT
Mamatha
Experienced Technology Delivery Lead with expertise in Agile, DevOps, AWS, software development (Java, C++, Oracle), security, and project management. Holds an MCA in Computer Science from Sri Venkateswara University, blending strong technical skills with a passion for arts and design. Adept at driving project success through innovative solutions and cross-functional leadership.
Save the date
Begins May 23
2025


DAYANANDA SAGAR UNIVERSITY
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SCHOOL OF ENGINEERING
INDUSTRY CONCLAVE ON CURRICULUM DEVELOPMENT
ENGAGING FUTURE TALENT
Pramod.M.V.
Talent Acquisition Professional with 19+ years of experience, specializing in talent development and organizational transformation within matrix structures. Renowned for implementing innovative sourcing models and campus engagement strategies that boost brand awareness and attract top talent. Proven leader in employer branding through impactful programs like Leadership Connect Sessions and Hackathons.
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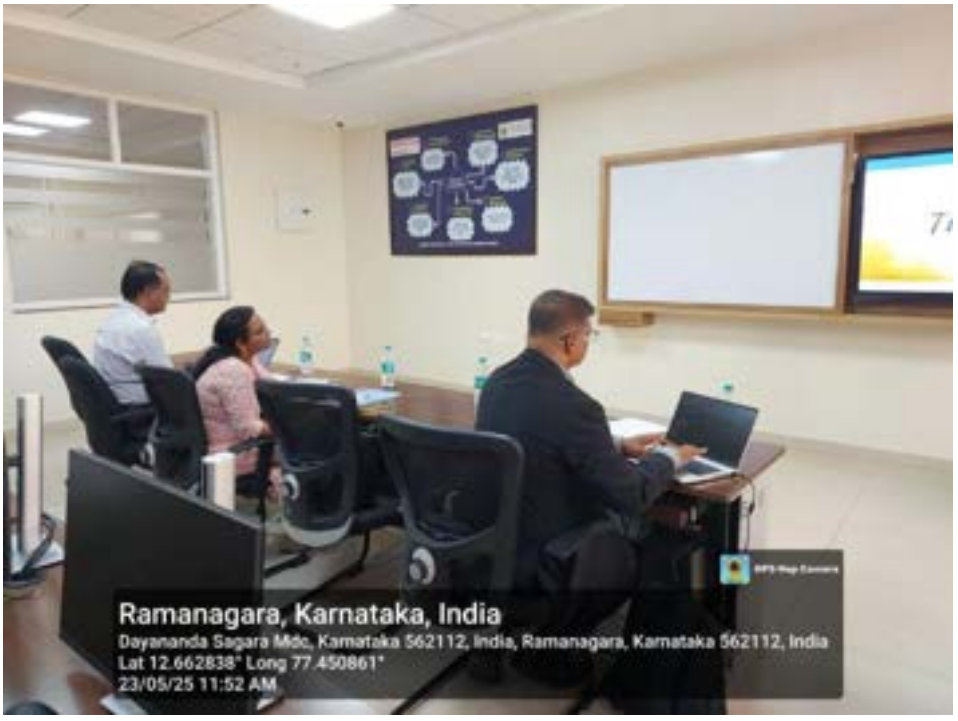
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Report
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Major Project Expo: MIND SPARK 2025

The Department of Data Science conducted its Major Project Expo on 24th May 2025 for the 8th semester students, offering a platform to present their final-year project work to peers, faculty, and industry experts. A total of 15 teams participated in the event, showcasing projects that tackled real-world problems using cutting-edge data science techniques. The expo was inaugurated by **Dr. Shaila S. G**, Chairperson of the Department, who addressed the students and emphasized the importance of innovation and hands-on learning.

Highlighted projects included Video Steganography, Emotion Recognition using Deep Learning, Smart Traffic Monitoring, and Healthcare Analytics. Students demonstrated practical applications of machine learning, artificial intelligence, and data visualization.

The event was judged by **Mr. Vinod D** from EY, RMZ Infinity, who evaluated each project based on its creativity, technical depth, real-world relevance, and presentation. He provided valuable feedback and encouraged students to align their learning with industry expectations.

Faculty members played a key role in mentoring and assessing the teams. The top three teams were awarded certificates of excellence for their outstanding contributions. The expo provided students with experience in presenting to a professional audience and fostered a culture of collaboration and innovation. It also served as a valuable networking opportunity. The event concluded with a vote of thanks and group photos. The Project Expo was a successful and inspiring event that reflected the department's commitment to academic excellence and industry readiness.


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Report
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TechSpark MATLAB Expo

The Department of CSE (Data Science) successfully organized a session on "Techspark Matlab expo 2025" on 24th May 2025. The event was held in collaboration with the IEEE student chapter ITS, and was coordinated by **Dr. Shaila S G**, Professor and Chairperson, Department of CSE (DS), along with **Prof. Shivamma D and Prof. Monish L**. The session witnessed active participation from students of the 4th semesters A section and B section.

Resource Persons: **Nisha U N**, Programmer Analyst, Cognizant

The Techspark MATLAB Expo 2025 was designed as an academic-industry interface to showcase innovative student projects and applications developed using MATLAB. The project focused on demonstrating how MATLAB can be effectively used for solving real-world problems in areas such as data science, signal processing, machine learning, image processing, control systems, and simulation.

During the expo, students presented mini-projects and prototypes that illustrated the practical implementation of theoretical concepts. These included:

- Data Visualization Dashboards
- Face and Emotion Detection using MATLAB Toolboxes
- Machine Learning Models for Predictive Analytics
- Image Filtering and Enhancement Projects

The goal of the project was to encourage students to apply classroom knowledge to hands-on problem solving using MATLAB. It helped build critical thinking, coding proficiency, and familiarity with industry-standard tools, while also enhancing their presentation and teamwork skills. The expo acted as a platform for peer learning, expert feedback, and technical exposure—aligning with the department's vision to promote experiential learning and innovation

Outcomes:

- Students gain practical skills in processing and analyzing medical images.
- They learn to interpret biomedical signals like ECG and EEG for health monitoring.
- Students understand how to create safe simulations of biological systems.
- They develop experience with machine learning to predict diseases using real data.


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