DATA GLIMPSE

A Newsletter of Department of Computer Science and Engineering (Data Science)
SOE, DSU, Bangalore

VISION AND MISSION

DSU

Vision

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

Mission

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

VISION AND MISSION

Data Science

Vision

To endow the succeeding generation of engineers for a data-centric world by expanding their capacity to contribute in the field of data science by providing an absolute resolution in social aspects

Mission

To develop the Department of CSE (Data Science) as a Center of Excellence in Data Science domain by imparting Quality Education and Research to the students. To motivate the students to be ethical data science practitioners and innovators in data-driven global society

Dayananda Sagar University, Innovation Campus, School of Engineering
Kudlu Gate, Hosur Road, Bengaluru - 560 068

DEAN'S MESSAGE

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

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

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

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

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

CHAIRPERSON'S MESSAGE

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

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

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

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

"Data science isn't about the quantity of data but rather the quality." — Joo Ann Lee

ABOUT THE PROGRAM

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

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

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

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

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

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

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

What's inside...

- Articles
- Programme Events
- Staff Achievements
- Student Achievements
- Result Analysis

And more....

"Playing with Data - Towards Data Science." — Shaila S G

FACULTY LIST

Dr. Shaila S G
Professor & Chairperson

Dr. Shaila S G has earned her Ph.D in Computer Science from NIT, Trichy, Tamil Nadu for her thesis on Multimedia Information Retrieval in Distributed System. She has 17 years of experience in teaching & research in the concerned field. She has worked for CPRI, Bangalore as a Trainee Engineer. Later, she worked as a Research Fellow for a DST project, India for a period of 3 years. She has also worked in Indo-US collaborated project for "Obama-Singh Knowledge Initiative Program" in the University of Nevada (UNLV), Las Vegas, United States. She is a certified IBM trainer for the Business Intelligence. Her research areas are Data mining, Information Retrieval, Image Processing and Computational Neuroscience. She has published more than 50 research articles in reputed Journals and Conferences, books and book chapters. She has 11 Indian Patents and 2 Australian Patents.

Dr. Kakoli Bora
Associate Professor

Dr. Kakoli Bora is an Associate Professor in the Department of CSE (Data Science). She had completed her Ph. D. in Computer and Information Science (Astroinformatics) from Visveswaraya Technological University, Belagavi, Karnataka. Her thesis title is Machine learning approach to understanding Astrophysical Data: The Final frontier: Novel Algorithmic study. She has 17 years of teaching & research experience in the field of Computer Science. She has worked for a startup named Happymonk AI Labs as Senior Data Scientist. Her research interests include Data mining, Image Processing and Deep Learning. She has published more than 15 research articles in reputed Journals and Conferences. She has published two book chapters.

Prof. Shivamma D
Assistant Professor

Shivamma D is working as an Assistant Professor in the Department of Computer Science and Engineering (Data Science). She is pursuing Ph.D in Dayananda Sagar University, Bengaluru. She completed her M.Tech from Birla Institute of Technology and Science (BITS), Pilani (Rajasthan). She has an extensive experience of 10 years in the field of Teaching and Research. She has worked as an IT Officer/IT Programmer/Data Analyst at National Institute of Mental Health And Neuro Science (NIMHANS), An Institute of National Importance, Government of India located at Bangalore. Her research interests are in the area of Technology Enabled Digital Learning, Machine Learning, Image Processing, Computational Neuroscience, Big Data Analytics and Data Science.

Prof. Monish L
Assistant Professor

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

"Data is the language of the powerholders." — Jodi Petersen

FACULTY LIST

Prof. Sindhu A
Assistant Professor

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

Prof. Vaishali Bagewadikar
Assistant Professor

Vaishali Bagewadikar is working as an Assistant Professor in the Department of Computer Science and Engineering (Data Science). She has completed her M.Tech from University of Visveswaraya College of Engineering, Bangalore and BE from Basaveshwara Engineering college, Bagalkot. She has 7 years of teaching experience and 1 year of industry experience from Unisys India Pvt ltd. Her area of interests are cloud and Fog computing, Machine learning, Data Science.

Prof. Shahwar Ara Kamal S
Assistant Professor

Shahwar Ara Kamal S is working as an Assistant Professor in the Department of Computer Science and Engineering (Data Science). She has completed her B.E in Information Science from APS College of Engineering and M.Tech from Dayananda Sagar University, Bangalore. She has published one paper at International Conference Springer. Her areas of interest are Computer Networks, Machine Learning.

SUPPORTING STAFF

Divya R
Lab Instructor

Praveen R S
Office Assistant

"Big data isn't about bits, it's about talent." — Douglas Merrill

ARTICLES

Revolutionizing Healthcare through Data Science: The Transformative Impact and Future Prospects

Data science is spearheading a revolutionary transformation in the healthcare industry, fundamentally altering how medical professionals diagnose, treat, and manage patient care. By harnessing the power of machine learning and artificial intelligence, data science analyzes vast troves of patient data, leading to rapid and precise disease diagnosis, ultimately improving patient outcomes. One of the most significant contributions of data science in healthcare is its ability to predict and prevent health issues. Through predictive analytics, healthcare providers can identify individuals at risk of developing specific conditions even before symptoms manifest. This proactive approach enables early interventions and personalized care plans, reducing healthcare costs and improving overall patient well-being.

However, the implementation of data science in healthcare also raises ethical concerns, particularly concerning patient data privacy. To ensure trust and compliance, healthcare institutions must establish robust data governance practices and prioritize patient confidentiality while extracting valuable insights from data. Data science also plays a pivotal role in streamlining hospital operations and optimizing resource allocation. Analyzing patient flow data enables healthcare administrators to enhance efficiency, reduce wait times, and improve patient satisfaction. Moreover, real-time monitoring through wearable devices empowers patients to actively participate in their health management. Smartwatches and fitness trackers collect valuable health data, which data science transforms into actionable insights for both patients and healthcare providers. Looking ahead, data science's future prospects in healthcare are incredibly promising. Precision medicine, which tailors treatments based on individual patient characteristics, will be further enabled by data science advancements. Furthermore, data science will continue to play a vital role in combating public health emergencies, enabling real-time data analysis and evidence-based decision-making.

In conclusion, data science's impact on healthcare is profound, with improved diagnosis, personalized treatments, and optimized operations. Addressing ethical concerns and fostering collaboration among stakeholders will unlock the full potential of data science, propelling healthcare into a transformative future.

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

"It's easy to lie with statistics It's hard to tell the truth without statistics."— Andrejs Dunkels

Real-Time Object Motion Analysis through Computer Vision

Computer vision, a branch of artificial intelligence, has made significant advancements recently, revolutionizing a number of sectors. One of the fascinating applications of computer vision is people re-identification, a technology that enables the identification and tracking of individuals across different locations and timeframes. By leveraging sophisticated algorithms and deep learning models, computer vision has proven to be a powerful tool in enhancing surveillance systems, improving public safety, and optimizing various operational processes.

Traditional video surveillance systems often struggle with accurately tracking individuals in crowded and dynamic environments. Computer vision-based people re-identification techniques analyze and compare unique visual features, such as clothing, appearance, and gait patterns. This capability has empowered security personnel and law enforcement agencies to better monitor public spaces, identify suspicious activities, and enhance overall situational awareness. The integration of computer vision into public safety initiatives has had a profound impact on crime prevention and investigation. People re-identification technology enables the creation of comprehensive databases of individuals, enabling rapid identification of suspects or missing persons. Law enforcement agencies can leverage this technology to track the movement of individuals, identify potential threats, and solve criminal cases efficiently. Additionally, by incorporating real-time video analysis, computer vision systems can alert authorities in case of suspicious behavior, potentially preventing criminal activities and ensuring public safety.

Beyond security applications, people re-identification has found utility in various operational domains. For instance, in retail environments, it can be used to understand customer behavior, analyze footfall patterns, and personalize shopping experiences. By tracking and re-identifying customers, businesses can gain insights into shopping habits, preferences and demographics, enabling targeted marketing campaigns and improved customer service. Similarly, transportation hubs can employ people re-identification technology to manage passenger flows, optimize crowd management, and enhance the overall efficiency of operations.

There are several challenges persist in people re-identification. The accuracy of re-identification algorithms can be affected by variations in lighting conditions, occlusions, and changes in appearance. Additionally, privacy concerns and ethical considerations need to be carefully addressed to ensure responsible deployment of this technology. Future advancements may involve the integration of multimodal data, such as combining visual features with other sensor data like voice or biometrics, to enhance the accuracy and reliability of people re-identification systems. Moreover, ongoing research in deep learning and neural networks holds the potential for further improvements in feature extraction and matching algorithms. By leveraging sophisticated algorithms and deep learning models, this technology empowers security personnel, law enforcement agencies, and businesses to enhance their operations, improve safety, and provide personalized experiences. With ongoing advancements and research, the future holds tremendous potential for further development and innovation in this exciting field.

Dr. Kakoli Bora
Associate Professor
Dept. of CSE (DS)

"The data speaks for itself. That's the easiest measure of success." — Caitlin Smallwood

The Evolving Landscape of Data Science: Harnessing Insights for a Data-Driven Future

Data Science has emerged as a transformative force in the modern world, driving innovation and revolutionizing industries. It is a multidisciplinary field that combines domain expertise, statistical analysis, machine learning, and advanced programming to extract valuable insights from vast amounts of data. As the volume of data continues to grow exponentially, so does the demand for skilled data scientists who can make sense of this information deluge. Organizations across various sectors are increasingly relying on data-driven decision-making to gain a competitive edge. From personalized marketing strategies to predictive maintenance in manufacturing, data science is at the heart of these transformational changes. Additionally, the integration of Artificial Intelligence and Machine Learning has propelled data science to new heights, empowering businesses to make accurate predictions and drive meaningful outcomes. With its potential only beginning to be realized, data science is poised to shape our future in ways we cannot yet fully comprehend.

The data science landscape is constantly evolving, driven by advancements in technology, new algorithms, and an ever-expanding array of data sources. One significant trend in data science is the democratization of data analysis tools, making them accessible to non-experts and empowering them to utilize data for better decision-making. User-friendly platforms and automated machine-learning solutions are enabling organizations to leverage data without the need for extensive technical expertise. Moreover, the field of data science is embracing ethical considerations, recognizing the importance of responsible data usage, and ensuring privacy and security. To help data scientists handle sensitive information with integrity and transparency, frameworks for data ethics are currently being developed. Data science will continue to be essential in tackling complex problems in the future, including those relating to social and economic issues, environmental sustainability, and healthcare. The journey of data science is one of perpetual learning, exploration, and discovery, and its impact on society will be a defining aspect of the 21st century.

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

"The goal is to turn data into information, and information into insight." — Carly Fiorina

Unlocking the Careers Paths in Data Science

Data science has become a highly sought-after field with the potential to reveal valuable insights and drive informed decision-making. It offers diverse career opportunities across industries. Data scientists analyze data to uncover patterns and trends, building predictive models that guide business strategies. Data analysts visualize and interpret complex data, aiding decision-makers with valuable information. Machine learning engineers develop algorithms that automate processes and enhance customer experiences. Big data engineers manage large-scale data infrastructure using technologies like Hadoop and Spark. Business Intelligence (BI) analysts create reports and dashboards for data-driven decision-making.

Data architects design data infrastructure and storage systems for secure and efficient data analysis. Data engineers focus on data integration and processing, building data pipelines. Research scientists work on cutting-edge projects, advancing the field through research and innovation.

Aspiring data scientists should gain a strong foundation in mathematics, statistics, and programming languages like Python or R. Continuous learning and staying updated with industry trends are vital for success in this dynamic and rapidly evolving field. Data science professionals play a pivotal role in shaping a data-powered future, making positive impacts across industries.

Prof. Monish L
Assistant Professor
Dept. of CSE (DS)

"Data will talk to you if you are willing to listen". — Jim Bergeson

Data Science Transformative Role in Shaping the Manufacturing Industry

The manufacturing industry stands at the precipice of a profound transformation, with data science emerging as a dynamic force that is reshaping its landscape. This convergence of technology and industry is ushering in a new era of operational efficiency, product quality enhancement, and innovation. Through the ingenious application of data analytics, machine learning, and artificial intelligence, data science is revolutionizing manufacturing practices across multiple dimensions.

At the forefront of this transformation is predictive maintenance, a paradigm shift that has the potential to redefine how machinery and equipment are managed. Traditionally, manufacturers have operated on reactive maintenance models, addressing breakdowns as they occur. By integrating sensors and IoT devices into production lines, manufacturers can collect real-time data that is analyzed to predict when maintenance is needed.

The influence of data science extends deeply into quality control processes. Ensuring product excellence is a cornerstone of manufacturing, and data science is enhancing this aspect dramatically. Advanced machine learning algorithms are now capable of identifying even the minutest defects in real-time. Visual inspection systems, powered by AI, are replacing manual quality checks, reducing the likelihood of faulty products reaching customers. This translates to reduced waste, improved customer trust, and higher overall product quality.

The optimization potential of data science spans beyond maintenance and quality control. Manufacturers are leveraging data-driven insights to revolutionize supply chain management. Historical data combined with market trends enable informed decisions on procurement, production scheduling, and distribution. As a result, the right amount of inventory is maintained, reducing excess stock and minimizing storage costs. Supply chain optimization also leads to reduced lead times and improved coordination, enhancing customer satisfaction.

In conclusion, data science is at the forefront of transforming the manufacturing industry. From predictive maintenance and quality control to supply chain optimization, customization, and safety enhancement, its influence is far-reaching and transformative. As manufacturers increasingly embrace data-driven strategies, they are poised to attain unprecedented levels of efficiency, innovation, and competitiveness, cementing their positions in a rapidly evolving global marketplace.

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

"It's easy to lie with statistics It's hard to tell the truth without statistics."- Andrejs Dunkels

Empowering Business and Careers: The Influence of Data Science and AI in Today's World

Data science has emerged as a game-changer, revolutionizing industries and driving unprecedented advancements in technology. As we peer into the future, the potential for data science to reshape our world is both thrilling and profound. Here are some key aspects that will define the future of data science:

- AI-Powered Automation: The integration of data science and artificial intelligence will lead to sophisticated automation solutions. Businesses will leverage AI algorithms to streamline processes, improve efficiency, and reduce errors. Human efforts will shift towards strategic decision-making and creativity.
- Data Democratization: Data science tools will become more accessible, enabling businesses of all sizes to leverage data for insights and innovation. Data democratization will empower employees at all levels to make data-driven decisions, fostering a culture of informed decision-making.
- IoT and Big Data Convergence: The rise of the Internet of Things (IoT) will generate massive amounts of data from connected devices. Data science will play a crucial role in extracting valuable insights from this data, driving innovation in various sectors such as healthcare, transportation, and smart cities.
- Explainable AI: As AI systems become more complex, ensuring transparency and interpretability will be crucial. Future data science efforts will focus on developing models that can provide clear explanations for their decisions, boosting trust in AI systems.
- Personalization and Customer Experience: Data science will continue to elevate customer experience through personalisation. Businesses will leverage data insights to offer tailored products and services, enhancing customer satisfaction and loyalty.
- Ethical Data Use: Responsible data governance and ethics will be paramount as data science becomes more pervasive. Striking a balance between data utilization and privacy protection will be a critical challenge.
- Data Security and Privacy: As reliance on data grows, data security measures will evolve to safeguard sensitive information and prevent cyber threats.
- The future of data science holds immense potential to revolutionize every aspect of our lives. Responsible use, ethical considerations, and a focus on human-centric applications will be key to harnessing the full transformative power of data science. Embracing this future will lead to a world powered by data-driven insights and innovations, unlocking endless possibilities for progress and betterment.

VINU RAJ VAMSHI
II Semester

"We are surrounded by data, but starved for insights."— Jay Baer

PROGRAMME EVENTS

PRE – PLACEMENT TRAINING "COMMUNICATION SKILLS"

06 APRIL, 2023

The DataScience@DSU club, Department of Computer Science and Engineering (Data Science) has successfully organized a Pre-Placement training "Communication Skills" on 6th April, 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science) and Prof. Shivamma D, Assistant Professor, Dept. of CSE (DS). The targeted audience was 2nd year students of the Department of CSE (Data Science). The session was organized in offline mode. Around 45+ students were attended the session

Effective communication skills are an essential requirement for success in the workplace. For students preparing for pre-placement, it is crucial to develop and improve their communication skills to increase their chances of success in their future careers.

Objective of the event:

- To enhance the ability to express ideas and thoughts effectively
- To develop active listening skills
- To build the confidence and assertiveness

Resource Person: Shashirekha, Placement and Skill development, Bangalore

"Where there is data smoke, there is business fire."—Thomas Redman

"PARENT TEACHER MEETING" - 6TH SEMESTER STUDENTS
08TH APRIL, 2023

The Department of Computer Science and Engineering (Data Science) has successfully organised Parent Teacher Meeting for 6th Semester students on 8th April, 2023. A formal welcome address to parents was presented by the Dr. Shaila S G, Professor and Chairperson, Department of CSE (Data Science), Class advisor Prof. Shivamma D, Assistant Professor. The meeting included the importance of Parent-Teacher's meeting in both, students' and organization's point of view.

Actions Taken:

- The class advisor gave individual feedback about the students to their parents, suggested some corrective measures and gave an overall performance report of IA1.
- Parents were asked if they had any complaints regarding their wards, to which appropriate measures would be taken.
- Parents were asked if they had any suggestions or feedbacks for the organisation in any aspect, for which a detailed feedback form was provided.

"Data's just the world making noises at you."— Erin Shellman

POTLUCK - "TASTY TREASURES"
12TH APRIL, 2023

The DataScience@DSU club, Department of Computer Science Engineering (Data Science) has successfully organized a Potluck "Tasty Treasures" on 12th April, 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science) and Prof. Monish L, Assistant Professor, Dept. of CSE (DS). The targeted audience were students of the Department of CSE (Data Science). Around 60+ students participated in the Potluck.

Objectives:

- ·Community Building
- ·Wellness and Stress Relieve

"Data is a precious thing and will last longer than the systems themselves." – By Tim Berners-Lee

"PRE – PLACEMENT TRAINING"
18TH APRIL, 2023

The DataScience@DSU club, Department of Computer Science Engineering (Data Science) has successfully organized a "Pre-Placement training" on 18th April, 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE(Data Science) and Prof. Shivamma D, Assistant Professor, Dept. of CSE (DS). The targeted audience was 3rd year students of the Department of CSE (Data Science). The session was organized in offline mode. Around 45+ students were attended the session

The pre-placement training is an essential step for students to prepare themselves for the job market. It helps them develop the necessary skills and knowledge required to succeed in the workplace

Objective of the event:

The objective of the pre-placement training program is to prepare the students for the recruitment process and help them enhance their technical and soft skills.
Outcome:

- ·To enhance their technical skills and gain practical knowledge.
- ·To improve their soft skills, including communication, teamwork, and leadership.
- ·To develop their aptitude skills and perform well in the recruitment process.
- ·To gain confidence in their abilities and prepared them for the recruitment process.

Resource Person: Raghavendra, CISCO, Bangalore

"Good Big Data teams will be very tolerant of failure".— Graham Oakes

FACULTY ENRICHMENT PROGRAM
"LTI MINDTREE"
20TH APRIL, 2023

From the Department of Computer Science and Engineering (Data Science), Prof. Monish L Assistant Professor have attended the Faculty Enrichment Program organized by the LTI Mindtree, Bangalore on 20th April 2023.

Firstly, they gave a small introduction about the LTI Mindtree and its value in the international market and the employees across the world. Umesh Krishnamurthy, Associate Vice President, Head – Global Transition. He briefed about the roles of transition manager. A transition manager is responsible for overseeing the smooth transition of a project or process from one state to another, ensuring that it is completed efficiently and effectively. This typically involves planning, coordinating, and monitoring the various stages of the transition, as well as managing any risks and issues that may arise. The ultimate goal of a transition manager is to achieve a successful outcome while minimizing disruption and ensuring that the transition aligns with the organization's strategic objectives.

Chandan Pani, Chief Information Security Officer, Corporate Security. He discussed the Organizational change management and curriculum aspects. Organizational change management refers to the process of planning, implementing, and guiding changes within an organization to achieve desired outcomes. It involves carefully managing the people, processes, and systems affected by the change to minimize resistance, maximize adoption, and ensure successful implementation. It typically includes activities such as assessing the need for change, creating a change management plan, communicating the change to stakeholders, providing training and support, and monitoring progress. Effective organizational change management is crucial for organizations to adapt and thrive in today's dynamic business environment

"The most valuable commodity I know of is information."— Gordon Gekko

MOTIVATIONAL TALK "TRANSFORMING DREAMS INTO REALITY: THE ROADMAP TO SUCCESS"

12TH MAY, 2023

The DataScience@DSU Club, the Department of CSE (Data Science) organized a Motivational Talk on Transforming Dreams into Reality: The Roadmap to Success" held on 12th May, 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science), Prof. Shivamma D, Assistant Professor, Dept. of CSE (Data Science).

The Speaker M K Krishna emphasized the importance of self-belief and confidence. They highlighted that believing in oneself is the first step towards achieving any goal. Various techniques and practices were shared to boost self-confidence and develop a positive mindset.

The talk focused on goal setting and the significance of defining clear and specific objectives. The speaker provided practical tips for setting realistic and achievable goals, breaking them down into actionable steps, and creating a timeline for their attainment. They stressed the importance of aligning goals with personal values and aspirations.

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

Keynote Speaker: Sri M K Krishna, Founder President, GGGC (Giant's Group of Garden City), Bangalore.

The objective of the talk is:

* The speaker inspired the students with bigger dreams and to chase them.
* The speaker gave lot of tips and tricks to reach their academic goals with enthusiasm and dedication.
* The speaker talked about joy of learning and to develop a mindset to accept the challanges to reach their career goals.
* The Speaker has shared his insights and experiences about personal development, changes, adaptability, growth and how to face them in their corporate life.

Number of students Participated: 81 students

"Data really powers everything that we do."— Jeff Weiner

PROJECT EXPO
"MINDSPARK – 2023" TEAM OF TANGENTS
17TH MAY, 2023

The 2nd year (4th Semester) and 3rd year (6th Semester) Project Expo "MINDSPARK - 2023" Team of Tangents was conducted on 17th May, 2023 in the Department of Computer Science and Engineering (Data Science), SOE, Dayananda Sagar University. The entire event was planned and organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (DS), Prof. Shivamma D, Assistant Professor and Prof. Shahwar Ara Kamal S, Assistant Professor, Dept. of CSE (DS).

Project Expo "MINDSPARK - 2023" Team of Tangents was inaugurated by the Chief Guest Mr. Sunil Kumar - Director of operations, Asia, Inheaden and Mr. Dennis Kohl - CEO, Inheaden, Germany

Expert Panel:

1.Narasimha Sarovar, Global Senior Product Manager, Johnson Controls, Bangalore
2.Ashraff Sankanal, Senior Data Scientist, Altair, Bangalore.
Special Guest:

1.Dr. K N B Murthy, Vice Chancellor, DSU
2.Dr. Amit Bhatt, Pro-Vice Chancellor, DSU
3.Dr. Udaya Kumar Reddy K R, Dean, SOE, DSU
4.Dr. M K Banga, Dean Research, DSU
5.Mr. Vijay Kumar, Placement Director, DSU

Dr. Shaila S G Professor and Chairperson, Dept. of CSE (DS),Dayananda Sagar University encouraged everyone with her motivational speech and advised students to be more creative with innovative ideas and projects to address real time societal issues.

The esteemed Chief Guest, Mr. Dennis Kohl, along with Mr. Sunil Kumar and Dr. MK Banga, launched the second edition of the Data Science Newsletter titled "DATA GLIMPSE," Volume 2 Issue 1.

"Who has the data has the power."— Tim O'Reilly

Mr. Narasimha Sarovar and Mr. Ashraff Sankanal delivered addresses to the students, emphasizing the importance of exploring opportunities and providing solutions to real-time problems in areas such as Healthcare, Agriculture, IoT, Data Science, and more.

Dr. K N B Murthy, Vice Chancellor, Dr. Amit Bhatt, Pro-Vice Chancellor, and Dr. M K Banga, Dean of Research, along with esteemed guests Mr. Sunil Kumar, Mr. Dennis Kohl, and Mr. Vijay Kumar, addressed the students, expressing their thoughts on the projects. They commended the students for their efforts and acknowledged their research work in innovative and environmentally sustainable projects. The faculty members were recognized for their guidance and support throughout the students' journey. The project expo attracted faculty members and students from various departments who visited the demonstrations and provided valuable feedback on the event.

There were about 21 projects from 3rd year students on Data Analytics by using Altair tool and 17 projects from 2nd year students on IOT. The students were asked to make poster presentations. The Projects were demonstrated and showcased in front of external and internal panel members. The experts were requested to evaluate the projects and declare the best project. The process of evaluation commenced at10:30 am and completed at 2:15 pm.

“All the projects were THE BEST, the Evaluators had a very tough time in selecting best project”.

The valedictory ceremony of the event commenced at 2:30 pm. The winners' names were announced by Prof. Shivamma D., and the prizes were distributed to all the winners of the project expo by Mr. Narasimha Sarovar and Mr. Ashraff Sankanal.

Winners: Theme 1: IOT (4th semester students)

1st Prize- R Prem Kumar Reddy, Rakshita R, Ushashree
2nd Prize - Mir Khyrun Ali, Prasad, Eshwar M, Nikunj
3rd Prize - Chaithra K, Shubham Kumar, Nivas Reddy

Winners: Theme 1: Data Analytics by using the tool ALTAIR (6th semester students)

1st Prize- Sukrutha G and Manju Swaroop V
2nd Prize - Chandan M Poonacha and Rudra Narayan Chetty
3rd Prize - Ayesha Malaika and Varun N

Finally, Prof. Shivamma D. concluded the event by expressing gratitude to all the guests, students, faculty members, and project teams for their dedicated efforts in making the event a resounding success.

Objectives of the event:

The main objective of organizing the project expo is to provide the platform and unleash the potential of the students by showcasing their innovative projects based on either as Industry Define Problem or User Define Problem and provide an opportunity for the students to demonstrate their learning experience. Unique and innovative ideas were required in this event.

“Who has the data has the power.”— Tim O’Reilly

GLIMPSE OF THE EVENT

"Data science isn't about the quantity of data but rather the quality." — Joo Ann Le

INDUSTRY VISIT
"ISRO-UR RAO SATELLITE CENTRE"
6TH JUNE, 2023

One-day Industrial Visit to ISRO UR Rao Satellite Centre, Bengaluru, was organized by the Department of CSE (Data Science), on 6th June 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science) and Prof. Monish L, Assistant Professor, Dept. of CSE (DS). The visit was undertaken by 55 students of 4th semester, accompanied by 4 faculty members.

U R Rao Satellite Centre (URSC), Bengaluru, formerly known as ISRO Satellite Centre (ISAC) is the lead centre for building satellites and developing associated satellite technologies. These spacecrafts are used for providing applications to various users in the area of Communication, Navigation, Meteorology, Remote Sensing, Space Science and interplanetary explorations. The Centre is also pursuing advanced technologies for future missions. URSC is housed with the state-of-the-art facilities for building satellites on end-to-end basis. ISRO Satellite Integration and Test Establishment (ISITE) is equipped with state-of-the-art clean room facilities for spacecraft integration and test facilities including a 6.5 Metre thermos vacuum chamber, 29 Ton vibration facility, Compact Antenna Test Facility and acoustic test facility under one roof. Assembly, Integration and Testing of all Communication and Navigation Spacecraft is carried out at ISITE. A dedicated facility for the product ionisation of standardised subsystems is established at ISITE.
URSC has a unit called Laboratory for Electro Optics System (LEOS), which is situated in Peenya, Bengaluru and is mainly responsible for research, development and product ionisation of Sensors for ISRO programmes.

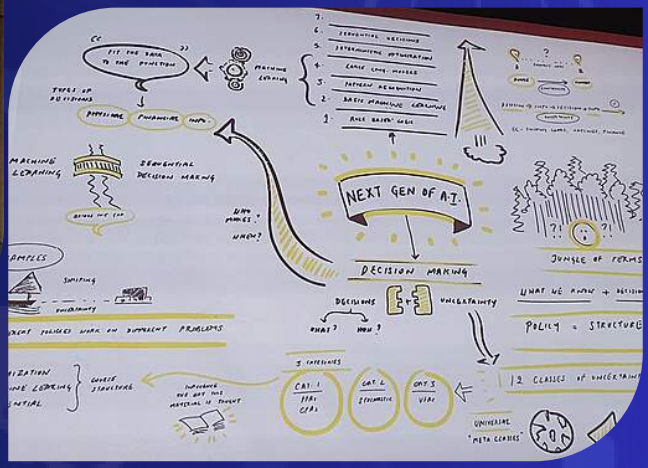
The visit was undertaken by 55 students of 4th semester, accompanied by 4 faculty members.

Faculties attended:

Prof. Monish L, Assistant Professor
Prof. Shivamma D, Assistant Professor
Prof. Vaishali B, Assistant Professor
Prof. Shahwar Ara Kamal, Assistant Professor

"Data beats emotions." — Sean Rad

TARGET MULTIPLAI - 2023
AN EXCLUSIVE CONFERENCE ON
"BUILDING FUTURE - READY RETAIL WITH AI"
7TH JUNE, 2023



The "Building Future-Ready Retail with AI at Scale" conference, held at Target Multiplai in 2023, brought together leading experts, industry professionals, and AI enthusiasts to explore the latest advancements and applications of artificial intelligence (AI) in the retail sector. The conference aimed to provide insights into leveraging AI technologies to create more personalized, efficient, and engaging retail experiences.

Key Takeaways:

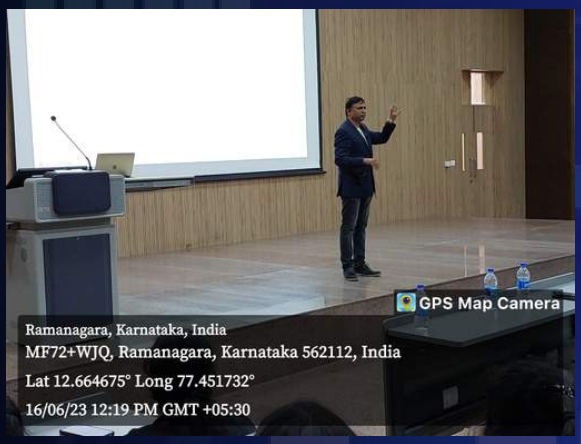
·Personalization and customer-centricity are vital for retail success in the AI era. AI technologies enable retailers to tailor experiences, provide recommendations, and engage customers in more meaningful ways.
·AI-driven supply chain optimization can significantly improve operational efficiency, reduce costs, and enhance customer satisfaction. Retailers should explore AI tools for demand forecasting, inventory management, and logistics optimization.
·Data analytics powered by AI can unlock valuable insights from customer data, driving better decision-making and improving business outcomes.
·AI offers exciting possibilities for visual merchandising, including product recognition, smart shelving, and AR experiences. Retailers should consider integrating AI solutions to create more immersive and engaging in-store experiences.
·Ethical considerations must be prioritized when implementing AI solutions in retail. Retailers should strive for transparency, fairness, and accountability while ensuring AI systems are free from biases and protect customer privacy.

Faculties attended:

·Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (DS)
·Prof. Monish L, Assistant Professor
·Prof. Shivamma D, Assistant Professor

"One person's data is another person's noise." — K. C. Cole

TECH TALK ON
"CAREER GUIDANCE FOR DATA SCIENCE"
16TH JUNE, 2023



TThe DataScience@DSU Club, the Department of CSE (Data Science) organized a "Carer guidance for Data Science" held on 16th June, 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science), Prof. Shivamma D, Assistant Professor, and Prof. Monish L, Assistant Professor Dept. of CSE (Data Science).

Speaker Mr. Nayan Naidu emphasized the significance of acquiring essential skills in data science and cyber security. He urged students to focus on programming languages like Python and R, while also honing their skills in data manipulation, statistical analysis, and machine learning algorithms. A strong foundation in these areas forms the cornerstone of success in the data science field. He discussed the variety of roles available, including Data Analysts, Machine Learning Engineers, and Data Scientists. Mr. Naidu highlighted the importance of a data-driven approach in today's decision-making landscape.

Speaker Nayan Naidu discussed the option of pursuing higher education to enhance specialization and career prospects. He suggested considering master's programs in Data Science, Business Analytics, or related fields. Mr. Naidu also highlighted the value of research-oriented programs for those inclined towards academic pursuits. Speaker stressed the significance of internships in providing practical exposure to real-world data challenges. He encouraged students to actively seek internships in data science-related roles to gain hands-on experience, build a professional network, and enhance their resumes.

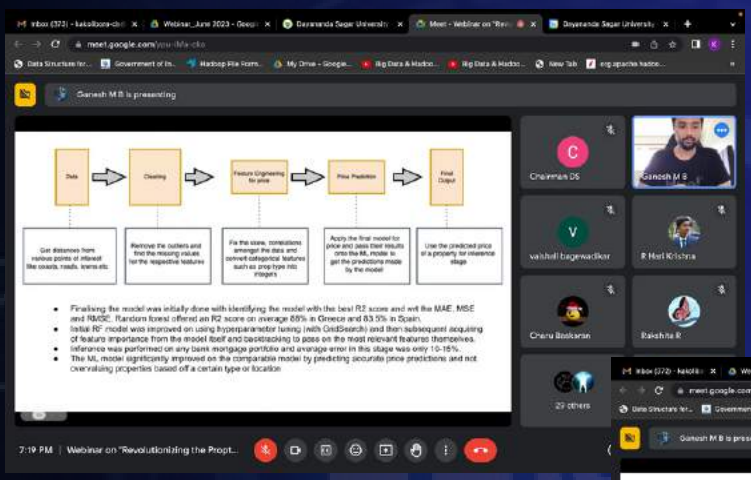
During the session, Mr. Naidu shared insights on the importance of showcasing practical skills through a well-curated portfolio. He encouraged students to work on data science projects that highlight their abilities in data analysis, machine learning, and data visualization. Sharing these projects on platforms like GitHub demonstrates their expertise to potential employers.
Lastly, Mr. Naidu highlighted the ever-evolving nature of data science. He encouraged students to prioritize continuous learning through online courses, webinars, and staying informed about the latest tools and techniques.

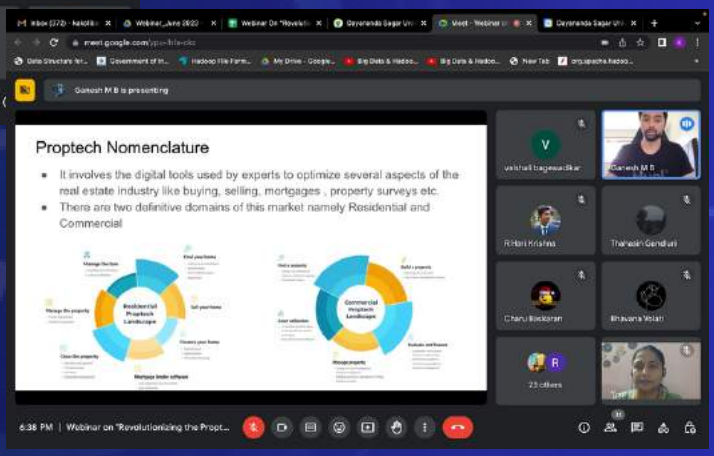
Resource Person: Mr. Nayan Naidu
Head DevOps & Agile practice,
Altimetrik India Pvt. Ltd., Bangalore

"Data is the new science. Big Data holds the answers." – By Pat Gelsinger

WEBINAR REPORT ON "REVOLUTIONISING THE PROPTECH MARKET: UNLEASHING THE POWER OF DATA SCIENCE"

16TH JUNE, 2023





The Department of CSE(Data Science) has successfully organized a webinar on "Revolutionizing the Proptech Market: Unleashing the Power of Data Science". The resource person was Mr. Ganesh M Bhat, Data Scientist from Centrica, London, UK. The targeted audiences were 2nd, 4th and 6th semester students of Data Science.

The students were given knowledge on the present technologies that a Data Scientist practices on a regular basis. The speaker used the property market as an example and explained how Machine Learning, Deep Learning and Computer Vision is applied on Proptech Market.

The students took active participation in the event. At the end feedback was taken from the students and it was found to be satisfactory.

Resource Person: Ganesh M Bhat
Data Scientist @ Centrica, London

"Learning how to do data science is like learning to ski. You have to do it" – Claudia Perlich

FACULTY ACHIEVEMENTS

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

Research Publication

1. Monish L, Sumana Sg, Shaila Sg, Atul Uppin, Deva Prasad Rr, Preetika Ray, Satvik Reddy A (Accepted) - "Emotion Prediction based on Real-Time Crowd Analysis using Deep Neural Network" in 10th International Conference on Recent Trends in Computing (ICRTC 2023), Springer.

2. Manju Swaroop V, Sanchith S, Sukrutha G, Shaila Sg, Monish L, Rajesh Tm (Accepted) - "Sensitive Data Classification Using Deep Learning with Sequential Models: An Analysis of Performance and Comparative Study" in 10th International Conference on Recent Trends in Computing (ICRTC 2023), Springer.

3. Shaila Sg, Vijayalaxmi Inaamdhar, Monish L, Rahul Kumar, Ruchith B M, Sagar M A, Sai Lakshmi Sridhar (Accepted) - "Prediction of Breast Cancer using Machine Learning and Deep Learning Models" in 10th International Conference on Recent Trends in Computing (ICRTC 2023), Springer.

4. Tejashree K, Dr Rajesh T M, Shaila S G, Pritee Parwekar (Accepted) - "Analysis of arrhythmia from electrocardiogram(ECG) data using ML framework" in 10th International Conference on Recent Trends in Computing (ICRTC 2023), Springer

Reviewer

1. Dr. Shaila S G has Reviewer for ScienceDirect journal Engineering Applications of Artificial Intelligence in the month of June 2023

"Data fabric is the next middleware" - Todd Papaioannou

FACULTY ACHIEVEMENTS

Dr. Kakoli Bora
Associate Professor
Department of CSE (Data Science)

Reviewer

1. Dr. Kakoli Bora has Reviewer for IEEE international conference on Networks, Multimedia and Information Technology organised by NITTE Meenakshi Institute of Technology on 7th June 2023.

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

Faculty Development Program

1. Attended a Faculty Diploma Program on “Cloud Computing & Devops Engineering” from 25th February, 2023 to 8th April, 2023 organised by PHN Technology Pvt LTD.

Certification

1. Rapid Miner Academy awarded certification in "Machine Learning Professional Certification" On April 29, 2023.
2. Completed 24 hours of course on "ServiceNow Administration Fundamentals" from May 02, 2023 to May 04, 2023.
3. Completed 24 hours of course on "Scripting in ServiceNow Fundamentals" from June 25, 2023 to June 27, 2023.
4. Received 4 badges by completing the ServiceNow Certification on May-June, 2023.

Reviewer

1. Prof. Shivamma D has Reviewer for IEEE International conference on Applied Intelligence and Sustainable Computing (ICAISC-2023) organised by SDM Engineering College, Dharwad on 16th and 17th June 2023.

"Data are just summaries of thousands of stories" - Chip & Dan Heath

FACULTY ACHIEVEMENTS

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

1. Awarded a grant of Rs 2000/- from KSCST to carry out the project on "Agrochemical Trend Analysis and Forecasting" on 18th April 2023

Research Publication

1. Monish L, Sumana Sg, Shaila Sg, Atul Uppin, Deva Prasad Rr, Preetika Ray, Satvik Reddy A (Accepted) - "Emotion Prediction based on Real-Time Crowd Analysis using Deep Neural Network" in 10th International Conference on Recent Trends in Computing (ICRTC 2023), Springer.

2. Manju Swaroop V, Sanchith S, Sukrutha G, Shaila Sg, Monish L, Rajesh Tm (Accepted) - "Sensitive Data Classification Using Deep Learning with Sequential Models: An Analysis of Performance and Comparative Study" in 10th International Conference on Recent Trends in Computing (ICRTC 2023), Springer.

3. Shaila Sg, Vijayalaxmi Inaamdhar, Monish L, Rahul Kumar, Ruchith B M, Sagar M A, Sai Lakshmi Sridhar (Accepted) - "Prediction of Breast Cancer using Machine Learning and Deep Learning Models" in 10th International Conference on Recent Trends in Computing (ICRTC 2023), Springer.

"Science is the practice of failing repeatedly but learning as you go" - Hilary Mason

STUDENT ACHIEVEMENTS

Abhishek (4th Semester J section Dept. of CSE (DS)) won the Second Place in Carrom Men Doubles and Men Singles in the Annual Sports meet conducted by Dayananda Sagar University during the year 2022-2023 on 26th April, 2023.

Varun (6th Semester I section Dept. of CSE (DS)) won the First Place in Stand up Comedy in the Annual Sports meet conducted by Dayananda Sagar University during the year 2022-2023 on 26th April, 2023.

Mir Khyrun Ali (4th Semester J section Dept. of CSE (DS)) won the second Place in Beat Boxing in the Annual Sports meet conducted by Dayananda Sagar University during the year 2022-2023 on 26th April, 2023.

Rakshita R, Akshaya B and Bindu B (4th Semester J section Dept. of CSE (DS)) won the Third Place in Rangoli in the Annual Sports meet conducted by Dayananda Sagar University during the year 2022-2023 on 26th April, 2023.

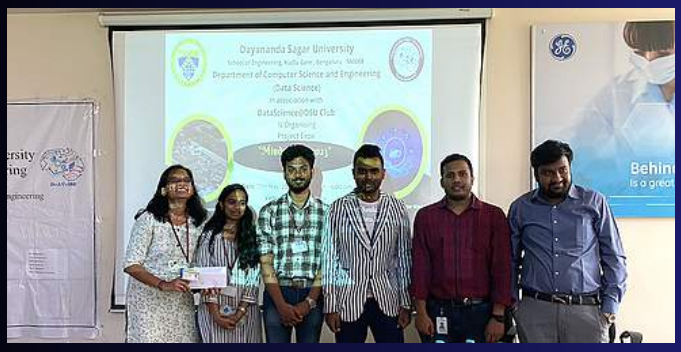
"No great marketing decisions have ever been made on qualitative data." - Kunihiko Fukushima

STUDENT ACHIEVEMENTS

- **Shaik Waseem (4th Semester J section Dept. of CSE (DS)) won the First Place in Gaming Volarent in the Annual Sports meet conducted by Dayananda Sagar University during the year 2022-2023 on 26th April, 2023.**

- **Manju Swaroop V, Sanchith S, Sukrutha G, Shaila Sg, Monish L, Rajesh Tm (Accepted) - "Sensitive Data Classification Using Deep Learning with Sequential Models: An Analysis of Performance and Comparative Study" in 10th International Conference on Recent Trends in Computing (ICRTC 2023), Springer.**

- **Monish L, Sumana Sg, Shaila Sg, Atul Uppin, Deva Prasad Rr, Preetika Ray, Satvik Reddy A (Accepted) - "Emotion Prediction based on Real-Time Crowd Analysis using Deep Neural Network" in 10th International Conference on Recent Trends in Computing (ICRTC 2023), Springer.**



R Prem Kumar Reddy, Rakshita R, Ushashree N (4th Semester J section Dept. of CSE (DS)) won the First Place in Project Expo "MINDSPARK" Team of Tangents (IOT) conducted by the Dept. of CSE (Data Science) on 17th May 2023.

9. Mir Khyrun Ali, Prasad, Eshwar M, Nikunj (4th Semester J section Dept. of CSE (DS)) won the Second Place in Project Expo "MINDSPARK" Team of Tangents (IOT) conducted by the Dept. of CSE (Data Science) on 17th May 2023.

"Data is the language of the powerholders." — Jodi Petersen

STUDENT ACHIEVEMENTS

Chaithra K, Shubham Kumar, Nivas Reddy (4th Semester J section Dept. of CSE (DS)) won the Third Place in Project Expo "MINDSPARK" Team of Tangents (IOT) conducted by the Dept. of CSE (Data Science) on 17th May 2023.

Sukrutha G and Manju Swaroop V (6th Semester I section Dept. of CSE (DS)) won the First Place in Project Expo "MINDSPARK" Team of Tangents (Data Science) conducted by the Dept. of CSE (Data Science) on 17th May 2023.

Chandan M Poonacha and Rudra Narayan Chetty (6th Semester I section Dept. of CSE (DS)) won the Second Place in Project Expo "MINDSPARK" Team of Tangents (Data Science) conducted by the Dept. of CSE (Data Science) on 17th May 2023.

Ayesha Malaika and Varun N (6th Semester I section Dept. of CSE (DS)) won the Third Place in Project Expo "MINDSPARK" Team of Tangents (Data Science) conducted by the Dept. of CSE (Data Science) on 17th May 2023.

"All analytics models do well at what they are biased to look for." — Matthew Schneider

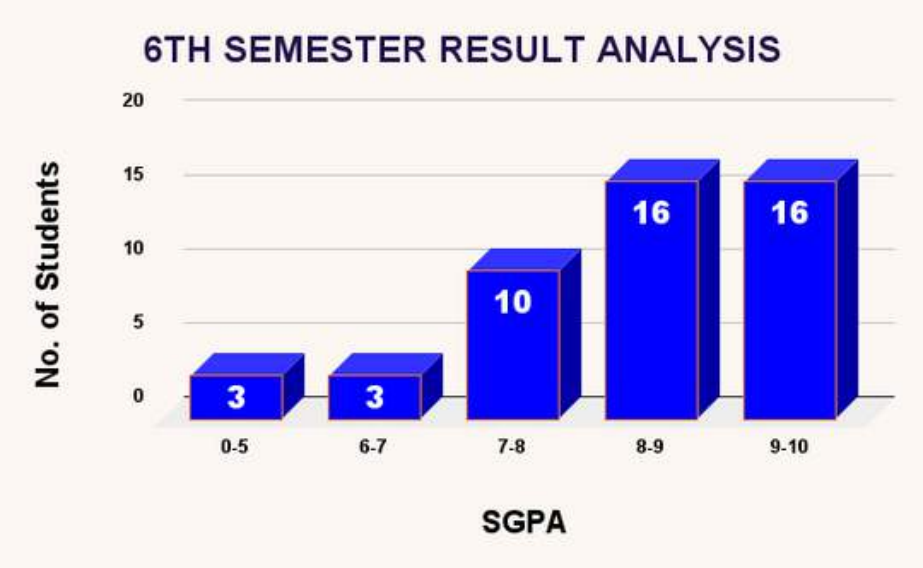
RESULT ANALYSIS

6TH SEMESTER TOPPERS (2020 BATCH)

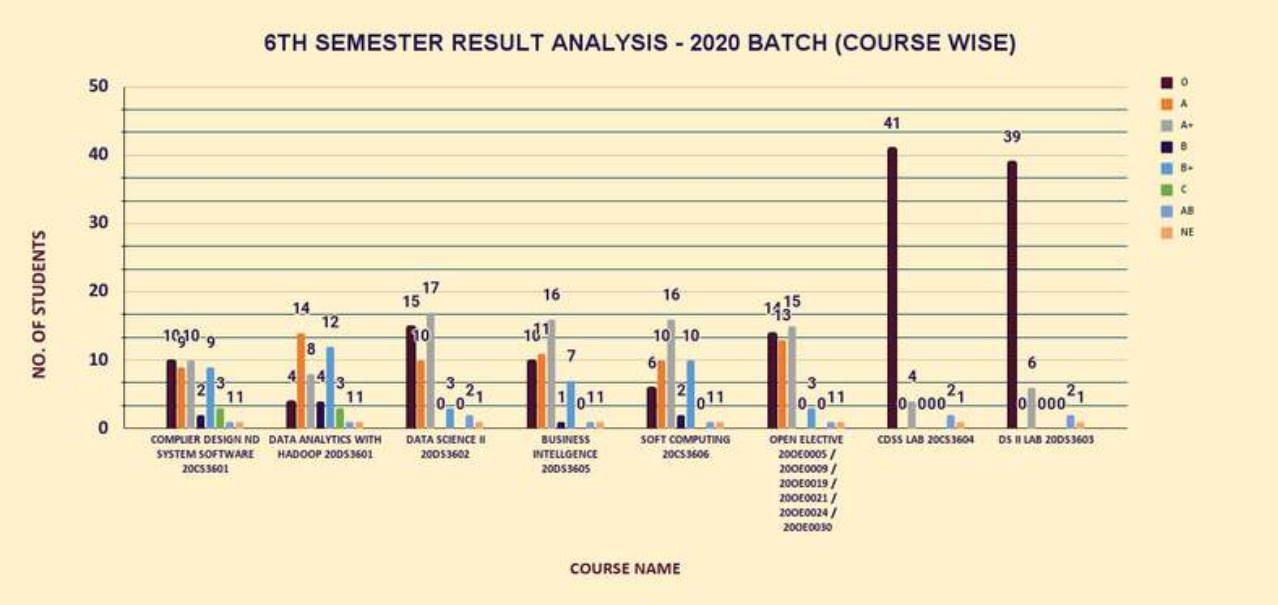
USN	NAME OF THE STUDENT	SGPA
ENG20DS0002	ABHIRUCHI SANJAYKUMAR BHARAMBE	10
ENG20DS0023	MANJU SWAROOP V	9.86
ENG20DS0048	YASHNA KARKERA	9.86
ENG20DS0015	DHANUSHA R	9.71
ENG20DS0026	NANDINI HAZARIKA	9.71
ENG20DS0037	SANJAY M	9.71
ENG20DS0022	M MADAN	9.67
ENG20DS0044	VEDANTH V BALIGA	9.57
ENG20DS0040	SUKRUTHA G	9.52
ENG20DS0018	K SAI PRADEEPTHI	9.43

"Like what you do, and then you will do your Best" - Katherine Johnson

RESULT ANALYSIS (2020 BATCH)



6TH SEMESTER RESULT ANALYSIS - 2020 BATCH (COURSE WISE)



"Intuition is thinking that you know without knowing why you do." - Daniel Kahneman

GALLERY

"The best way to predict the future is to invent it"- Alan Kay

EDITORIAL COMMITTEE

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

Department of Computer Science and Engineering
(Data Science)
Dayananda Sagar University
Innovation Campus, School of Engineering
Kudlu Gate, Hosur Road, Bengaluru - 560 068

"Education is not the learning of facts, but the training of the mind to think"- Albert Einstein

PROGRAMME OUTCOME (PO'S)

- PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

"Everything is theoretically impossible, until it is done" - Robert A Heinlein

PROGRAM EDUCATIONAL OBJECTIVES (PEO'S)

- PEO1. Possess confident professional Data Science skills to build powerful knowledge model to generate actionable insights, necessary for making data-driven decisions.
- PEO2. Apply the structured statistical, mathematical methodology and visualization tools to process massive amount of data to identify hidden patterns to make predictions considering realistic constraints.
- PEO3. Knowledge delivery in terms of analytics, visualization, design, research and development, product implementation, verification and validation, optimization in the field of Data Science by using modern tools and techniques.
- PEO4. Problem solving for societal aspects, carrier enhancement by altering professional certifications, and seeking higher education

PROGRAM SPECIFIC OUTCOMES (PSO'S)

- PSO1. Inculcate the principles of Data Science, Data Management, Data Security and Visualization for building intelligent predictive
- PSO2. Applying the knowledge of analytics, statistics and Machine Learning concepts to solve real world business problems

Department of Computer Science and Engineering
(Data Science)
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"The science of today is the technology of tomorrow" - Edward Teller