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 1 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 7 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.

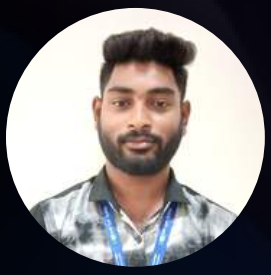
Prof. Vaishali Bagewadikar
Assistant Professor

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 Engg and M.Tech in Data Science from Dayananda Sagar University, Bangalore. Working as Assistant Professor in CS Cluster, Data Science. She has published one paper at International Conference Springer. Her areas of interest are Computer Networks, Machine Learning.

NON - FACULTY LIST



Praveen R S
Office Assistant

Praveen R S is working as an Office Assistant in the Department of Computer Science and Engineering (Data Science). He has completed his B Sc from the University of Mysore at Bharathi College Bharathi Nagara.

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

ARTICLES

Empowering Early Detection: How Data Science is Revolutionizing Breast Cancer Diagnosis

Breast cancer is one of the most common forms of cancer among women worldwide. Early detection is critical to successful treatment and positive outcomes for patients. The use of machine learning algorithms has revolutionized the early detection of breast cancer, enabling doctors to identify potential cases at an early stage with greater accuracy and speed. Machine learning algorithms can be trained on vast datasets of mammograms, allowing them to identify patterns and correlations in the data that may not be visible to the naked eye. This means that they can pick up on subtle changes in breast tissue that may be indicative of cancer before they are noticeable through traditional diagnostic methods. One popular approach to breast cancer detection using machine learning is the use of artificial neural networks (ANNs). These algorithms are modeled on the way the human brain works, with layers of interconnected nodes that process and analyze data. ANNs can be trained on thousands of mammograms, allowing them to learn to recognize patterns in breast tissue that are indicative of cancer. Another promising approach is the use of deep learning algorithms, which are a type of neural network that can learn to recognize complex patterns in data. Deep learning algorithms have been shown to be highly effective at identifying breast cancer in mammograms, with some studies reporting accuracy rates of over 90%. The use of machine learning algorithms for breast cancer detection has several advantages over traditional diagnostic methods. One of the main benefits is speed. Machine learning algorithms can analyze thousands of mammograms in a matter of minutes, allowing doctors to identify potential cases of breast cancer quickly and accurately. Another advantage is accuracy. Machine learning algorithms can identify patterns and correlations in the data that may not be visible to the human eye, enabling them to detect potential cases of breast cancer at an earlier stage than traditional methods. However, there are also some potential drawbacks to the use of machine learning algorithms for breast cancer detection. One of the main concerns is the potential for false positives and false negatives. Machine learning algorithms are only as accurate as the data they are trained on, and if the data contains errors or biases, the algorithm may produce inaccurate results. Despite these concerns, the use of machine learning algorithms for breast cancer detection shows great promise in the fight against this deadly disease. With further research and development, these algorithms could become an invaluable tool for doctors in the early detection and treatment of breast cancer, potentially saving countless lives in the process.

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

Driving Innovation: How Data Science is Changing the Automobile Industry

Data science is changing the landscape of the automobile industry. From the production line to the sales floor, data science is being used to improve efficiency, reduce costs, and create a better customer experience. In this article, we will explore the influence of data science in the automobile industry and how it is revolutionizing the way cars are made and sold. Data science is being used to optimize production lines in automobile manufacturing plants. By analyzing data from sensors and other sources, manufacturers can identify bottlenecks and inefficiencies in the production process. This information can then be used to make changes to the production line, such as adjusting the placement of machines or changing the timing of certain processes, to improve efficiency and reduce costs. Data science is also being used to improve the maintenance of automobiles. By analyzing data from sensors and other sources, manufacturers can identify potential issues before they become major problems. This allows them to schedule maintenance and repairs at a convenient time, reducing downtime for the vehicle owner and minimizing repair costs.

Autonomous vehicles are the future of the automobile industry, and data science is playing a crucial role in their development. Data from sensors and cameras is being used to train machine learning algorithms to recognize and respond to different driving situations. This will enable autonomous vehicles to navigate roads safely and efficiently, reducing accidents and improving the overall driving experience. Data science is being used to create a more personalized experience for automobile owners. By analyzing data on customer preferences and behaviors, manufacturers can create customized offers and services that meet the specific needs of each customer. This could include personalized financing options or tailored maintenance packages, for example. Data science is also being used to improve the sales and marketing of automobiles. By analyzing data on customer behavior, manufacturers can identify trends and patterns that can be used to create more effective marketing campaigns. This could include targeted advertising or customized offers for specific customer segments.

In conclusion, data science is having a significant impact on the automobile industry, from production line optimization to sales and marketing. As the amount of data generated by automobiles continues to grow, the influence of data science is only set to increase. By leveraging the power of data science, manufacturers can create better products, reduce costs, and provide a better customer experience, ultimately driving the industry forward.

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

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

Streaming Data Analysis

Streaming data analysis is a rapidly growing field of data science that deals with the continuous processing and analysis of big data in motion. With the increasing adoption of the Internet of Things (IoT) and other connected devices, a vast amount of data is generated in real-time. Equipment clickstreams, social media feeds, sensors, stock market quotes, app activity, and more are examples of streaming data. With streaming analytics, businesses may find and analyze trends, visualize data, share insights and warnings, and start activities in real- time or very close to it. Streaming data analysis involves processing and analyzing data in real time as it arrives. This approach is different from traditional batch processing, which involves collecting data and processing it in batches at a later time. In streaming data analysis, the data is analyzed as it is generated, allowing for faster decision-making and real-time responses.

One of the primary challenges of streaming data analysis is the sheer volume of data that needs to be processed. To handle this volume of data, streaming data analysis systems use distributed computing architectures that divide the data into smaller chunks and distribute it across multiple nodes for processing. This allows for parallel processing and faster analysis. Another challenge is the need for real-time analysis. Real-time analytics systems are divided into hard and soft real-time. A missed deadline in a hard real-time system is catastrophic and in soft real-time systems, missed deadlines can lead to unusable data. Real-time analytics makes no assumptions about a particular architecture, however, streaming analytics also assumes the existence of a streaming architecture.

There are several applications of streaming data analysis, including fraud detection, predictive maintenance, and social media analytics. In fraud detection, real-time analysis of credit card transactions can help detect fraudulent activities and prevent financial losses. In predictive maintenance, real-time sensor data can be used to identify potential equipment failures and schedule maintenance proactively. In social media analytics, real- time analysis of social media feeds can help identify emerging trends and sentiment analysis of brand mentions. To implement streaming data analysis, several technologies and tools are available. These include Apache Kafka, Apache Storm, Apache Spark, and Apache Flink. These tools provide distributed computing, real-time data processing, and scalable data storage, making it possible to process large volumes of data in real time.

In conclusion, streaming data analysis is a rapidly growing field of data science that is essential for analyzing real-time data generated by the IoT and other connected devices. The challenges of streaming data analysis, including the volume of data and the need for real-time analysis, require the development of scalable and efficient algorithms and distributed computing architectures. With the increasing adoption of connected devices and the growth of the IoT, the demand for real-time data analysis is expected to increase, making streaming data analysis a critical field for the future of data science.

Lohith R D
VI Semester

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

Potential Of Applied AI In Drug Discovery

Artificial Intelligence for Drug Discovery is estimated to reach revenue levels of $843 million by 2030. This traction, conviction and growing confidence in Drug Discovery with Artificial Intelligence can be attributed to advancements in novel methods and explainable AI. Here are a few major areas where Applied AI is playing a major role in Drug Discovery.

Target Identification, Sequencing and Validation deals with the identification of the function of the possible molecular target and its role in a disease, which is aimed at finding the efficacy target of a drug. This requires the evaluation of functional genomics, structural genomics, and proteomics. In most ML problems the input data can be represented in the form of feature matrices but the complexity of molecular and genomic data in medical applications makes it nearly impossible to generate numerical representations and embeddings. For example, applying feature engineering by deep Autoencoders, variational Seq2Seq Encoders, and binary classification by XGBoost algorithm on 'genome-wide protein interaction network, drugs, and their targets' information to produce scores for potential targets to enable target prioritization. In the effort to understand the detailed spatial 3D structure of proteins and molecular complexes, the AI platform also relies on training computer vision and machine learning models on microscopic 2D structure data.

Preclinical Studies are laboratory tests carried out to test the efficacy profile of probable drugs in in-vivo environments. In the evaluation of the toxicology profile of a compound, the most expensive parameter, and time-consuming task, algorithms are already in place and evaluated for more than 10000 environmental chemicals. Applied AI can provide great impetus to discovering patterns and models from a large corpus of data aiding in predicting the toxicity of compounds. Long RNA sequences are impossible to evaluate even for experienced scientists. Recent developments in AI enable extraction of viable and crucial information from LSTM can help in establishing correlations between different strands of RNA, essentially helping with predicting the molecular mechanism of action.

Lead Compound Screening and Optimization step involve hits followed by leads identification, where a selection of drug candidates is done through combinatorial chemistry, high throughput screening, and virtual screening. AI-based Virtual Screening is the compound technique that is made by pulling mass quantities from publicly available chemogenomics libraries, which includes tens of millions of compounds annotated with information about their structure. It uses Naïve Bayesian Classifiers, k-Nearest Neighbours, Support Vector Machines, and State-of-the-art Neural Networks algorithms to enable the efficient finding of potential lead molecules among millions of compounds, thus speeding up the initial stages of drug development.

Cell Target Classification has actively leveraged AI to detect features from different classes of cells and extract features. These features are reduced dimensionally by t-SNE and PCA.

Even though its limitations, Applied AI would surely revolutionise the process of drug discovery and reinvent traditional methods in the pharmaceutical industry!

Vedanth V Baliga
VI Semester

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

Emerging Trends in Data Science: Shaping the Future of Business Intelligence

Data science has been a buzzword for the past few years, and it continues to be an important field for businesses and industries worldwide. As data continues to grow exponentially, so do the trends in data science. In this article, we will explore some of the top trends in data science that are shaping the industry today. Automation and artificial intelligence (AI) are becoming increasingly important in the field of data science. The ability to automate tasks such as data cleaning, pre-processing, and analysis can save data scientists a considerable amount of time, allowing them to focus on more complex tasks. AI algorithms can also help to identify patterns and trends in data, making it easier for businesses to make informed decisions.

Cloud computing has been a significant trend in the tech industry over the past few years, and data science is no exception. Cloud computing allows businesses to store, manage, and analyze large amounts of data more efficiently than ever before. It also provides greater flexibility, allowing businesses to scale their data operations up or down as needed.

Explainable AI becomes more prevalent in data science, explainable AI is becoming increasingly important. Explainable AI refers to the ability to understand and explain the reasoning behind the decisions made by AI algorithms. This is critical for businesses that need to understand why a particular decision was made and to ensure that it aligns with their values and objectives. Data privacy and security is were more data is being collected and analyzed, data privacy and security are becoming increasingly important. Businesses must ensure that they are collecting data ethically and that they are protecting their customers data from cyber threats. Additionally, regulations such as GDPR and CCPA are changing the way that businesses handle data, making it even more critical to prioritize data privacy and security. Data storytelling is becoming an increasingly important trend in data science. Data scientists must be able to communicate their findings to non-technical stakeholders effectively. This requires not only technical skills but also the ability to present data in a compelling and easy-to-understand way.

In conclusion, data science is a rapidly evolving field, and these trends are just a few of the many that are shaping the industry today. As businesses continue to collect and analyze more data, data scientists must stay up-to-date with the latest trends and technologies to ensure that they are providing the most value to their organisations.

VINU RAJ VAMSHI
I Semester

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

PROGRAMME EVENTS

FACULTY ENRICHMENT PROGRAM ON "COGNIZANT DIGITAL NURTURE REVERENCE"

From the Department of Computer Science and Engineering (Data Science), Dr Shaila S G, Professor and Chairperson have attended the Faculty Enrichment Program organized by the Cognizant, Bangalore on 10th January 2023.

The aim is to learn from the academia while empowering a team of teaching faculties with effective industry insights has now gained momentum with the launch of the program and together can drive it to success.

The launch event provided a clear vision of the reverence journey that awaits us ahead. They were grateful for the insights shared during the event as it truly enhanced our understanding and was a great learning opportunity for all of us. Inputs were valued as they will help to refine this program to best fit your learning expectations.

Session on Gen-C

Generation C is a uniquely defined generation that gathers all those who are "connected consumers". This label makes it seem that Generation C falls into the same definition as Millennials. But 'Gen C' is not bound by age. They are a psychographic group (instead of a demographic group) bound by values, interests, personality traits, attitudes, and lifestyles – not when they were born.
Members of Generation C are "digital natives" who have integrated technology into every aspect of their daily routine. They turn to the internet instinctively and extensively to do any number of things.

Faculty attended: Dr Shaila S G, Professor and Chairperson, Dept. of CSE (DS)

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

RECENT ADVANCES IN DATA STRUCTURES FOR DATA SCIENCE APPLICATIONS

The DataScience@DSU club, Department of CSE (Data Science) and in association with CSI has successfully organized a value added course on “Recent Advances in Data Structures for Data Science Applications" on 11th January, 2023. The targeted audience were 3rd semester students. Around 30+ students participated in the Value added course. The speaker gave an insight of Recent Advances in Data Structures to the students. The organisers of this event are Dr. Shaila S G, professor and Chairperson, Prof. Monish L and Prof. Sindhu A Assistant Professor, Dept. of CSE(DS)

Resource Person: In House Faculties:

1. Dr. Kakoli Bora, Associate Professor, Dept. of CSE (DS)
2. Prof. Sindhu A, Assistant Professor, Dept. of CSE (DS)

The objectives of the event are:

- Understand the basic principles and operations of data structures.
- Applying the concepts of advanced data structures for solving the real time problems effectively.
- Apply the concepts of advanced Trees and Graphs for efficiently solving problems

“Data’s just the world making noises at you.”— Erin Shellman

A SESSION BY PLACEMENT CELL "CAMPUS TO CORPORATE FOR PRE FINAL YEAR"

The DataScience@DSU club, Department of Computer Science Engineering (Data Science) has successfully organized a session by Placement Cell"Campus to Corporate" on 7th February 2023. The targeted audience was 3rd year students of the Department of CSE (Data Science). The session was organized in offline mode. Around 40+ students were attended the session

The session began with an overview of the placement records for the 2021 and 2022 batches, including package details. The speaker also discussed the annual campus recruitment process, outlining the eligibility criteria and necessary skills for participation.

In addition, a new platform called NEOPAT was introduced, which provides learning resources and enables students to take part in codeathons and hackathons. Students will be placed into various salary buckets based on their skill levels. The speaker also stressed the importance of creating a resume.

Resource Person: Vijay Kumar
Deputy Director Training, Placement & Skill Development SOE. DSU

Objective of the Training:

The primary aim of the training program is to familiarize campus students with corporate culture.

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

TECH TALK ON
“WEB 3.0 - INTERNET OF THE FUTURE"

The DataScience@DSU Club, the Department of CSE (Data Science) organized a Tech Talk on “Web 3.0 - Internet of the Future” held on 10th February 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science), Prof. Monish L, Assistant Professor, Dept. of CSE (Data Science). The event was inaugurated with a commencement speech by Dr. Shaila S G. Professor and Chairperson, Dept. of CSE (Data Science).

The Speaker Mr. Ashwin Prased, Tech Lead Mr. Muaaz Khan, Operations Lead @FLAQ gave a detailed overview of Web 3.0 technology and also explained the difference between Web 2.0 and Web 3.0

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

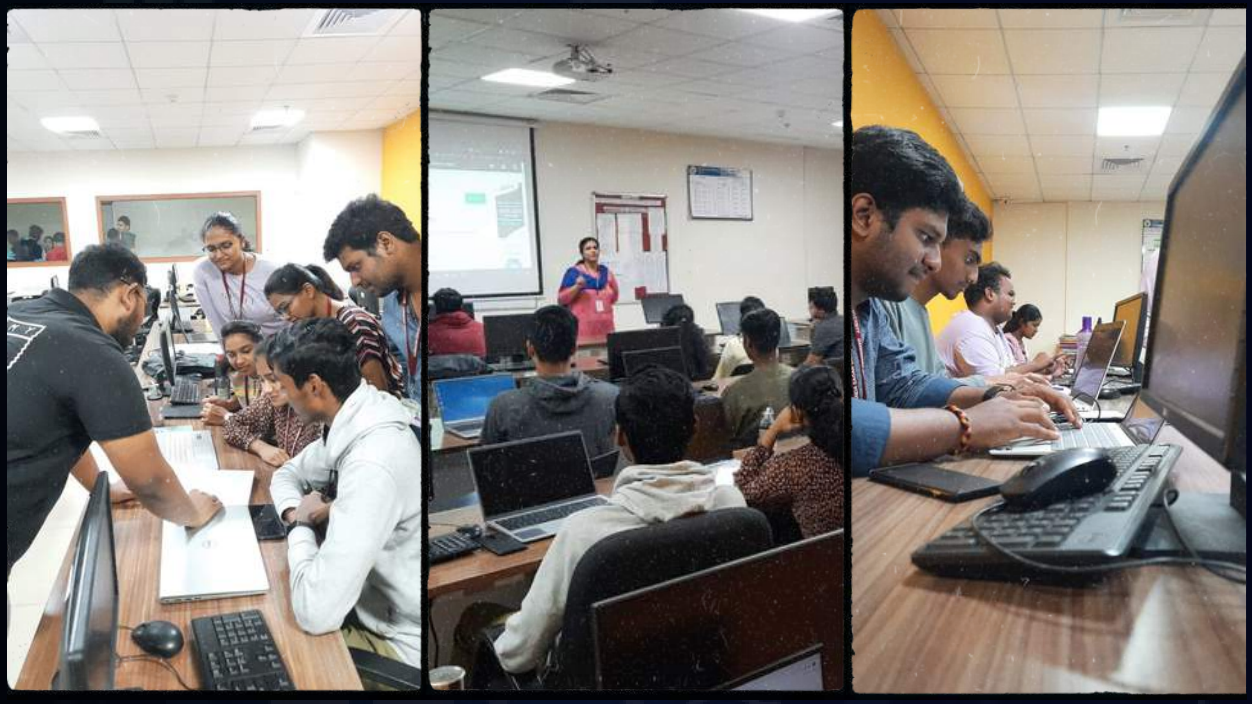
Resource Person: 1. Mr. Ashwin Prased, Tech Lead @FLAQ
2. Mr. Muaaz Khan, Operations Lead @FLAQ

The Takeaways of the event are:

- Understanding the features of Web 3.0, transformation from web 2.0 to 3.0 for the third generation.
- Redefining the web experience with structural changes to ensure democratization across all aspects of the internet.
- Web 3.0 promises for present Business modes with respect to artificial intelligence, cryptocurrency and blockchain technology.

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

HANDS-ON WORKSHOP WITH TIPS AND TRICKS FOR COMPETITIVE CODING "CODEATHON C - 2023"



Under the DataScience@DSU Club, the Department of CSE (Data Science) organized an offline "Codeathon-C" on 11th February, 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science), Prof. Monish L, Assistant Professor, Dept. of CSE(Data Science), and Prof. Sindhu A, Assistant Professor, Dept. of CSE (Data Science). The event was inaugurated with a commencement speech by Dr. Shaila S G. Professor and Chairperson, Dept. of Data Science.

The targeted audience were 1st year B.Tech students. The workshop consisted of a multitude of topics supported by hands-on sessions, handled by faculty experts from the Department of CSE(Data Science) and student coordinators. The main highlight of the event was students taught. The Student coordinator team included Sukrutha G, Rudra Narayan Chetty, Yashna Karkera, Adithya Challa.
The event covered Introduction to C programming and topics like Arrays, Pointers, Functions, Structures, Union, file system. The session has proven to be very inspiring and informative for the students.

Education goals:

- Understanding the basics of C programming
- To be able to implement basic C programs
- Understand the programming logic behind every program
- Introduction to competitive programming

Learning achievements:

- Students got a basic idea about c programming
- The presentation was incorporated sample programs and followed by practice problems
- Practiced advanced C programming
- Students learnt optimized coding

Resource Person: In-House Faculties and Student Coordinators

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

WORKSHOP ON REVOLUTIONARY DATA ANALYSIS AND PREDICTIVE POWER FOR BUSINESS WORLD USING TABLEAU AND POWER BI

Under the DataScience@DSU Club, Department of Computer Science & Engineering (Data Science) organized a workshop on "Revolutionary Data Analysis and Predictive Power for Business World Using Tableau and Power BI" on 22nd February, 2023. The organizers for the workshop were Dr. Shaila S G, Chairperson, Dept. of CSE (Data Science), Prof. Shivamma D, Prof. Monish L, and Dr. Kakoli Bora, Dept. of CSE (Data Science).

Having expertise in the field of BIG DATA, the speaker discussed demographic data results and data security challenges, and provided clarifications and guidance to the participating students. The workshop was aimed at 4th and 6th semester Data Science students who were trained on practical data analysis skills. The session commenced by introducing Power BI and Tableau, covering basic concepts and demonstrating how to create data visualizations using these tools. The benefits of using Power BI over Excel were clearly outlined, and the speaker emphasized the importance of data acquisition and pre-processing, while maintaining data privacy in the real world.

The workshop equipped the students with the foundational knowledge of Power BI and Tableau, enabling them to create interactive data visualizations. In addition, the speaker provided a comprehensive view on data privacy, discussing the various methods through which companies collect and use data and highlighting the ways in which this data can be protected. The workshop comprised several expert-led sessions.

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

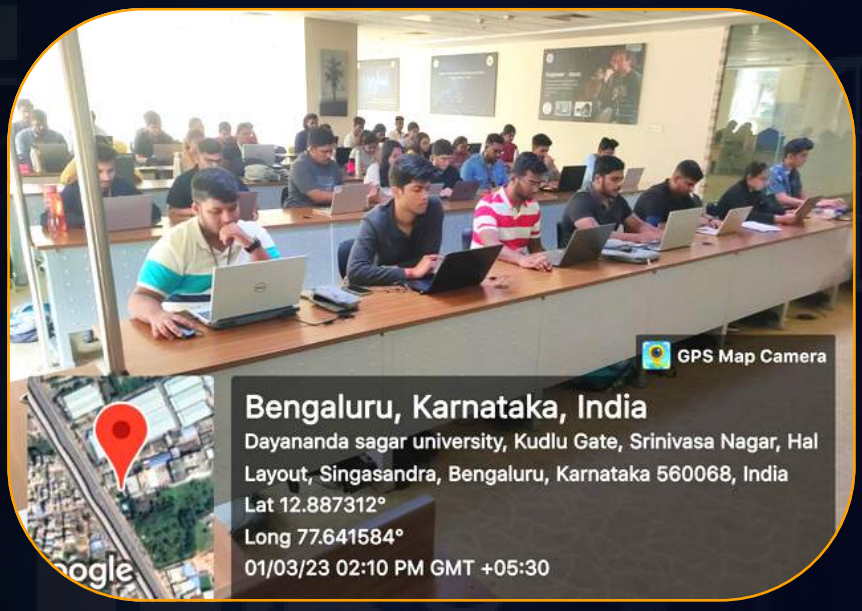
The Takeaways of the event:

- Understanding of data visualization principles both in PowerBI and Tableau
- Enable students to comprehend the greatest procedures for producing efficient visualisations
- Expertise in using PowerBI and Tableau numerous features and functionalities, including data import, dashboard creation, and advanced analytics.
- Experience with data analysis methods using actual world data

Resource Person: Gauthami B E
CTO and Co-founder - Cybersafe, Bangalore

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

A QUIZ ON DATA SCIENCE APPLICATIONS AND ITS USE CASES "RAPID MINER COMBAT"



Under the DataScience@DSU CLUB, in association with CSI, and Altair Engineering. The Department of Computer Science & Engineering (Data Science) organized a Quiz On Data Science Applications and its Use Cases "RAPID MINER COMBAT" on 1st march, 2023 from 11 AM. The organizers for the workshop were Dr. Shaila S G, Chairperson, Dept. of CSE (DS), Prof. Shivamma D, Assistant Professor, Prof. Monish L, Assistant Professor and Dr. Kakoli Bora, Associate Professor.

The Altair workshop was intended to give an overview of the Altair software and its application in engineering analysis, and the attendees received practical experience through instructional videos. On the other hand, the Rapid Miner combat was a simulation competition that focused on building efficient and effective mining operations. Additionally, a data science quiz was conducted to assess the understanding of the students on the various applications of data science in engineering.

The quiz was an effective tool in gauging the comprehension of the students on data science applications, and it helped to identify areas that needed further instruction. In the Rapid Miner combat, a combination of different unit types was an effective strategy, and the combat occurred on a square grid in a turn-based manner.

Overall, the Altair workshop provided a valuable opportunity to discuss various issues surrounding data privacy in the real world and allowed participants to understand where they stood in relation to data science disciplines. The quiz covered a range of topics such as data mining, machine learning, and artificial intelligence.

Objective of the Quiz:

- Evaluating the students' performance on the courses taken on the Rapid Miner Academy on Data Science applications and Its use cases

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

INDUSTRY VISIT "ISRO-ISTRAC"

One-day Industrial Visit to ISRO Telemetry, Tracking and Command Network (ISTRAC), Bengaluru, was organized by the Department of CSE (Data Science), on 2nd March 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 visit was undertaken by 47 students of 6th semester, accompanied by 3 faculty members. ISRO Telemetry Tracking and Command Network (ISTRAC), Bengaluru, is entrusted with the major responsibility to provide tracking support for all the satellite and launch vehicle Missions of ISRO.

The major objectives of the Centre is to carry out mission operations of all operational remote sensing and scientific satellites, to provide Telemetry, Tracking and Command (TTC) services from launch vehicle lift-off till injection of satellite into orbit, and to estimate its preliminary orbit in space and hardware and software developmental activities that enhance the capabilities of ISTRAC for providing flawless TTC and Mission Operations service.

Mr B Sankar Madaswamy, Scientist/Engineer-SF, Manager welcomed the students at the venue. The students were first taken to an auditorium, and a video of the achievements of ISTRAC and Mars Orbiter Mission (MOM), which was India's first mission to Mars, was shown there.

Then visited the ISRO data center with a Data Scientist. He gave us a comprehensive explanation of the complex processes involved in data processing and storage of scientific data. The center is equipped with state-of-the-art technology, including firewalls, servers, tape libraries, switches, and racks. As we observed, incoming data from satellites and other sources are received and processed in multiple stages. The first step is passing through the firewall, which checks for the security and integrity of the data. Once the data has been deemed secure, it is then stored on the racks of the servers, which have a massive capacity to store petabytes of data.

To ensure the safety of the data, multiple copies of the same data are stored in the tape library. The scientist explained in detail the flow of data within the data center, and we saw all the switches that interconnect one server to the other. It was fascinating to see how the data was transmitted between servers, and how the switches played a crucial role in the process. Then, they were taken to the satellite control room. This allowed them to observe the real-time management and control of the satellites, providing a glimpse into the day-to-day operations of ISRO. They were able to witness the complex processes involved in managing the satellites, including monitoring their movements and adjusting their trajectory. Next, we were led to witness the 32M and 18 M antenna, which was instrumental in receiving signals from Chandrayaan 2. The staff at the facility elaborated on the process of controlling the antenna and its significant role in capturing signals from deep space.

Outcome of the Event:

- Students were impressed by the advanced technology used for data processing and storage and the intricate processes involved in satellite communication.
- The practical demonstration of the antenna model and the images captured by the satellites were fascinating, providing a deeper understanding of the role of satellites in geography and weather study.
- The visit to the 32M antenna facility was also enlightening, providing insight into the complexity of receiving signals from deep space.

"Data beats emotions." — Sean Rad

A SESSION BY PLACEMENT CELL "CAMPUS TO CORPORATE" 1ST AND 2ND YEAR B.TECH STUDENTS

The DataScience@DSU club, Department of Computer Science Engineering (Data Science) has successfully organized a - A Session by Placement Cell "Campus to Corporate" on 3rd March, 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 1st and 2nd year students of the Department of CSE (Data Science). The session was organized in offline mode. Around 45+ students were attended the session

The session began with an overview of the placement records for the 2021 and 2022 batches, including package details. The speaker also discussed the annual campus recruitment process, outlining the eligibility criteria and necessary skills for participation.

In addition, a new platform called NEOPAT was introduced, which provides learning resources and enables students to take part in codeathons and hackathons. Students will be placed into various salary buckets based on their skill levels. The speaker also stressed the importance of creating a resume.

Resource Person: Vijay Kumar
Deputy Director Training, Placement & Skill Development SOE. DSU

Objective of the Training:

- The primary aim of the training program is to familiarize campus students with corporate culture.

“One person’s data is another person’s noise.” — K. C. Cole

“WOMEN'S DAY CELEBRATION”

TThe DataScience@DSU club, Department of Computer Science Engineering (Data Science) has successfully organized a “Women’s Day Celebration” on 8th March, 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE(Data Science) and Prof. Shivamma D. The targeted audience was Faculties and students of the Department.

Women's Day is celebrated on the 8th of March every year to commemorate the social, economic, cultural, and political achievements of women. It is also a day to raise awareness about gender equality and the need for women's empowerment. Our Department celebrated Women's Day with great enthusiasm.

The Women's Day celebration began with a speech by the chairperson who highlighted the importance of women's empowerment and urged students to recognize and appreciate the contributions of women in society.

The Women's Day celebration was a huge success, with active participation from students and faculty alike. The event was not only entertaining but also educational, raising awareness about the importance of women's empowerment and the need to work towards gender equality. The celebration was a great opportunity for students to showcase their talent and creativity while also promoting social awareness. Overall, the Women's Day celebration was a great way to celebrate and honor the women in our lives and society.

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

WORKSHOP ON FRAMEWORKS FOR WEB DEVELOPMENT “WEB DEV"

The DataScience@DSU Club, the Department of CSE (Data Science) organized a Workshop on Frameworks for Web Development “WEB DEV" held on 21st March 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science), Prof. Monish L, Assistant Professor, Dept. of CSE (Data Science).

The Speaker Dr. Gousia Thahniyath gave an insight on web programming, the session started with introduction to basic HTML and CSS. The basic tags and CSS styles required to design a website were taught in the morning session. Further in the afternoon session the FSD club student coordinators assisted the participants in designing a sample website, the students designed a website for Burger promotion.

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

The Takeaways of the event are:

- Understand the major areas of web programming
- To gain the skill into web applications and development.
- To create website using HTML5, CSS3.

Resource Person: In-House Faculties and Student Coordinators

"Data is the new oil "- Clive Humby

A DEMO SESSION BY PLACEMENT CELL "NEOPAT PLATFORM"

The DataScience@DSU club, Department of Computer Science and Engineering (Data Science) has successfully organized a, A Demo Session by Placement Cell "NeoPAT" on 28th March, 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science), Dr. Vijay Kumar, Deputy Director, DSU 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 NeoPAT team visited to provide students with a training session on how to use their placement assessment and training tool. The platform offers innovative solutions to automate campus placement operations and helps the institution's placement cell prepare and upskill students to make them placement-ready. As part of the program, students are enrolled in seven courses and provided with information about ongoing placement drives. They are expected to participate in company-based tests and hackathons through the NeoPAT platform.
To improve their chances of success, students are encouraged to earn badges and super badges by completing multiple assessments for each course. These assessments cover a wide range of topics, including coding assessments and fundamental language concepts. Courses such as data structures and algorithms are particularly important for placement preparation. Faculty members play a critical role in various aspects of the assessment and its analysis. By leveraging NeoPAT's cloud-based platform, students can become more skilled and improve their chances of succeeding in the competitive job market. Thus, NeoPAT is providing a wholistic approach to our placement preparation.

Objective of the event:

- To provide a placement assessment and training tool that helps students for successful placement in the job market.
- The platform provides a range of assessments covering various topics, including programming languages, fundamental language concepts, data structures, algorithms, and more.
- The platform also offers company-based tests and hackathons to allow students to gain real-world experience and practical skills.
- The primary goal of NeoPAT is to equip students with the skills, knowledge, and experience they need to succeed in their careers.

Resource Person: Mr. Praneshwar
L1 Member- Customer Success Team at iamneo.ai

"Torture the data, and it will confess to anything" - Ronald Coase

A SESSION BY PLACEMENT CELL "THE INFOSYS FINACLE CERTIFICATION PROGRAM"

The DataScience@DSU club, Department of Computer Science Engineering (Data Science) has successfully organized a "The Infosys Finacle Certification Program" on 29th March, 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE(Data Science), Dr. Vijay Kumar, Deputy Director, DSU 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 speaker gave an introduction about the Infosys Finacle Certification Program is a certification program offered by Infosys, a global leader in next-generation digital services and consulting. The program is designed to provide students with comprehensive knowledge and skills required to develop and manage banking solutions using the Infosys Finacle platform. The program is divided into two parts: the Foundation Program and the Advanced Program. The Foundation Program provides students with an overview of the Finacle platform, including its architecture, modules, and functionalities. It also covers basic concepts in banking, such as financial accounting, customer management, and transaction processing. The Advanced Program builds upon the foundation program, delving deeper into the technical aspects of the Finacle platform. It covers topics such as customization, integration, and testing of Finacle solutions.

To participate in the program, students must be enrolled in a recognized academic institution and have a basic understanding of banking and financial services. The program is open to students pursuing degrees in engineering, computer science, and related fields. The program is offered online and includes self-paced learning modules, live webinars, and hands-on training sessions. Upon completion of the program, students are awarded a certification that demonstrates their expertise in the Finacle platform.
The certification program provides students with a valuable opportunity to gain practical knowledge and skills in the banking and financial services domain. It also enhances their employability, making them more attractive to potential employers in the industry. Overall, the Infosys Finacle Certification Program for students is an excellent initiative that provides students with the necessary skills and knowledge to succeed in the dynamic and fast-paced world of banking and financial services.

Objective of the Training:

- To provide comprehensive knowledge and skills required to develop and manage banking solutions using the Infosys Finacle platform.
- To enhance the employability of students by providing them with practical knowledge and skills in the banking and financial services domain.

Resource Person:

1. Puneet Chhahira, Vice president Head of Product Management and Marketing at Infosys Finacle
2. S Karthik V R, Business Manager – Learning and Development, at Infosys Finacle

"It is a capital mistake to theorise before one has data" - Sherlock Holmes

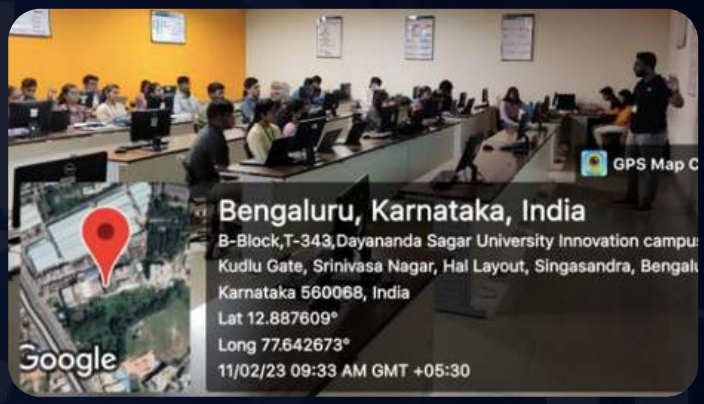
ALTAIR & RAPID MINER TOOLS, TRAINING AND CERTIFICATION 1ST FEBRUARY, 2023 TO 31ST MARCH 2023

Altair and Rapid Miner Training and certification was organized by Department of CSE (DS) in association with Altair One. The training was organized to all the students and faculties of the department. Dedicated classroom hours have been assigned to the Altair training in the Timetable. Dr. Shaila SG, Professor and Chairperson, Dept. of CSE (Data Science) and Prof Monish L, Assistant Professor, Dept. of CSE (DS) are the faculty coordinators for Altair Training.

A Session 1: 11th February 2023

Report:

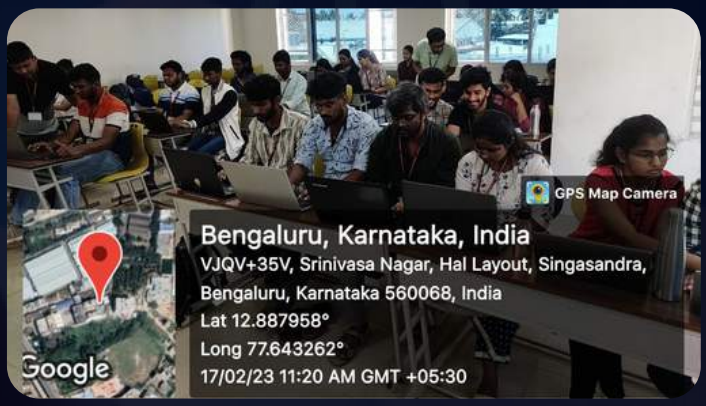
1. An Introduction to Altair Tools and Certifications was given to the students. Faculty coordinators explained the advantages how Altair is bridging the gap between the Industry and Academia.
2. An introduction to Altair Tools and Rapid miner tools and certification was explained to the students.



A Session 2: 17th February 2023

Report:

1. Students Explored the Rapid Miner Academy and installed the Rapid Miner Studio from Rapid Miner website.
2. Students also explored Altair university and installed Knowledge Studio in their personnel laptops.



"Data that is loved tends to survive" - Kurt Bollacker

Session 3: 22nd -28th February 2023

Report:

Students taking up the Rapid Miner course as a Value-Added Course on:

1. Data Engineering Master
2. Data Engineering Professional
3. Applications and Use cases

Course Completion Statistics:

Semester	Course Name	Platform	No of Students Awarded
6th Semester & 4th Semester	Data Engineering Professional Course and Certification	RapidMiner Studio [Altair University]	60
6th Semester	Data Engineering Master Course and Certification	RapidMiner Studio [Altair University]	40
6th Semester	Data Science Applications and Use Cases Professional Course and Certification	RapidMiner Studio [Altair University]	30 (ongoing)
6th Semester	Data Modelling with Knowledge studio	Altair University	6 (ongoing)

"No data is clean, but most is useful" - Dean Abbott

TECH TALK ON "UNLOCKING THE POTENTIAL OF CHAT GPT FOR DATA SCIENCE"

The DataScience@DSU Club, the Department of CSE (Data Science) organized a Tech Talk on "Unlocking the Potential of Chat GPT for Data Science" held on 31st March 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science), Dr. Kakoli Bora, Associate Professor, Dept. of CSE (Data Science) and Prof. Monish L, Assistant Professor, Dept. of CSE (Data Science). The targeted audience were 4th and 6th Semester students of CSE (DS). Around 60+ students were registered and attended the tech talk.

The Speaker Ms. Reshma R gave an insight on Chat GPT and its underlying technology. The session started with an introduction to the Evolution of Chat GPT and the various models used to develop it. The speaker talked about the differences between GPT3 and GPT3.5, what are the various applications Chat GPT is used for and what could be in the future.
At the end of the talk an evaluation was carried out and the students submitted great feedback.

The Takeaways of the event are:

1. Learning about ChatGPT can help data scientists understand natural language processing.
2. ChatGPT is based on machine learning techniques like deep learning and neural networks.
3. Learning about ChatGPT can aid in interpreting the model and identifying areas for improvement.

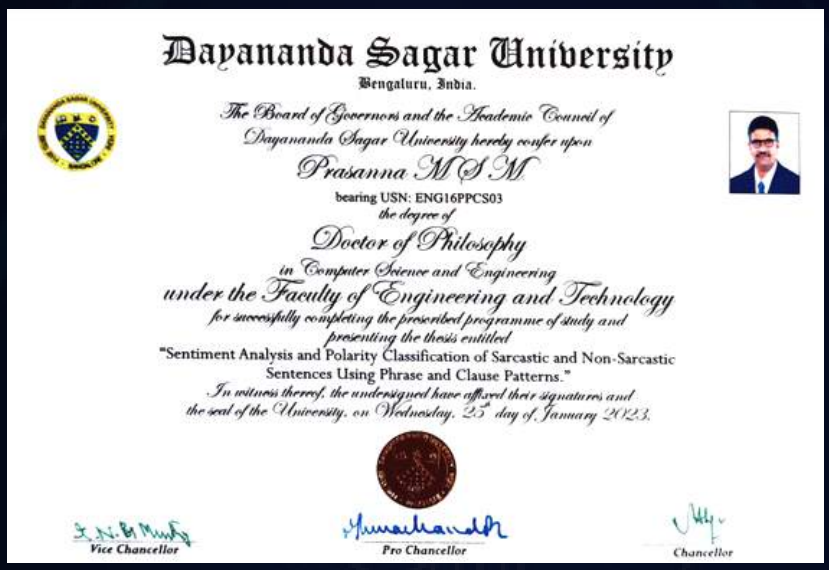
Resource Person: Reshma R, Research SDE @ Microsoft Research, India

"The world is one Big Data problem" - Andrew McAfee

FACULTY ACHIEVEMENTS

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

Ph.D. Awarded



Dayananda Sagar University
Bengaluru, India.

The Board of Governors and the Academic Council of Dayananda Sagar University hereby confer upon
Prasanna M S M
bearing USN: ENG16PPCS03
the degree of
Doctor of Philosophy
in Computer Science and Engineering
under the Faculty of Engineering and Technology
for successfully completing the prescribed programme of study and presenting the thesis entitled
"Sentiment Analysis and Polarity Classification of Sarcastic and Non-Sarcastic Sentences Using Phrase and Clause Patterns."
In witness thereof, the undersigned have affixed their signatures and the seal of the University, on Wednesday, 25th day of January 2023.

Vice Chancellor | Pro Chancellor | Chancellor

Mr. Prasanna MSM, Research Scholar completed his Ph.D in Computer Science and Engineering, under the supervision of Dr. Shaila S G, Professor and Chairperson, Data Science on "Sentiment Analysis and Polarity Classification of Sarcastic and Non-Sarcastic Sentences Using Phrase and Clause Patterns" and awarded Convocation on 25th January 2023.

Research Publication

- **Shaila SG**, Gurudas VR, Siddarth surgunaraj (Accepted) - "Breast Cancer Prediction based on Fusion framework of Shape and Texture features".(March) Elsevier, ATMA 2023.
- Monish L, **Shaila SG,** Rajesh TM, Sumana SG (Accepted)- "Piezoelectric Sensor-Based IoT Monitoring System for Apnea Disorder Prediction",(March) Elsevier, ATMA 2023
- **Shaila SG**, Monish L, Sumana SG (Accepted) - "Emotion Classification Based On Eeg Signals: A Comprehensive Study" in Emerging Research in Computing, Information, Communication and Applications" (ERCICA-2023), Springer.
- **Shaila, S G**, Vadivel, A. & Avani, S. "Emotion estimation from nose feature using pyramid structure" Multimed Tools Appl (2023). https://doi.org/10.1007/s11042-023-14682-w
- **Shaila, S.G.**, Bhat, G., Gurudas, V.R., Suresh, A., Hithyshi, K. (2023). BRCA1 Genomic Sequence-Based Early Stage Breast Cancer Detection. In: Mahapatra, R.P., Peddoju, S.K., Roy, S., Parwekar, P. (eds) Proceedings of International Conference on Recent Trends in Computing. Lecture Notes in Networks and Systems, vol 600. Springer, Singapore. https://doi.org/10.1007/978-981-19-8825-7_22

"Data fabric is the next middleware" - Todd Papaioannou

FACULTY ACHIEVEMENTS

Contd.,

- Prasanna, M.S.M., **Shaila, S.G**. & Vadivel, A. Polarity classification on twitter data for classifying sarcasm using clause pattern for sentiment analysis. Multimed Tools Appl (2023). https://doi.org/10.1007/s11042-023-14909-w

- **Shaila, S.G**., Sindhu, A., Shivamma, D., Suma Avani, V., Rajesh, T.M. (2023). Human Emotion Recognition Based on EEG Signal Using Deep Learning Approach. In: Mahapatra, R.P., Peddoju, S.K., Roy, S., Parwekar, P. (eds) Proceedings of International Conference on Recent Trends in Computing. Lecture Notes in Networks and Systems, vol 600. Springer, Singapore. https://doi.org/10.1007/978-981-19-8825-7_44

- **SG Shaila**, D Vinod, Joycelita Dias, Suman Patra "Twitter Data-based Sarcastic Sentiment Analysis using Deep Learning Framework," 2022 International Conference on Artificial Intelligence and Data Engineering (AIDE), Karkala, India, 2022, pp. 326-330, doi: 10.1109/AIDE57180.2022.10060759.

- **SG Shaila**, D Shivamma, US Monica, K Tejashree "Facial Expression Recognition for Compound Emotions using Mobile Net Architecture," 2022 International Conference on Artificial Intelligence and Data Engineering (AIDE), Karkala, India, 2022, pp. 187-190, doi: 10.1109/AIDE57180.2022.10060734.

- **SG Shaila**, D Vinod, Siddarth Sargunaraj "Sentence Patterns based Sarcasm Detection and Classification using Long Short Term Memory Model," 2022 International Conference on Artificial Intelligence and Data Engineering (AIDE), Karkala, India, 2022, pp. 301-305, doi: 10.1109/AIDE57180.2022.10060635.

- **SG Shaila**, VR Gurudas, L Monish, D Shivamma, N Sneha, Lekha Chowdary "Breast Cancer Detection based on Deep Neural Network using Multi-Model Features," 2022 International Conference on Artificial Intelligence and Data Engineering (AIDE), Karkala, India, 2022, pp. 92-95, doi: 10.1109/AIDE57180.2022.10059908.

Faculty Development Program

- Attended a 1 Day Faculty Development Program on “Devops Engineering” organised by PHN Technology Pvt LTD on 4th Feb 2023

- Attended a 5 Day Faculty Development Program on “Advanced Excel with Data Analytics” organised by IIT Kanpur, ICT Academy on 13th Feb 2023 to 17th Feb 2023

Certification

- Rapid Miner Academy awarded certification in "Data Engineering Professional Certification" On February 24, 2023.

- Rapid Miner Academy awarded certification in " Data Engineering Master Certification" On February 24, 2023.

- Rapid Miner Academy awarded certification in " Applications & Use Cases Professional Certification" On March 3, 2023.

"Without data you are just another person with an opinion" - W. Edwards Deming

FACULTY ACHIEVEMENTS

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

Certification

- Dr. Kakoli Bora completed the course “Mathematical Foundations of Machine Learning” from Udemy on 31st January 2023.

Faculty Development Program

- Attended a 1 Day Faculty Development Program on “Devops Engineering” organised by PHN Technology Pvt LTD on 4th Feb 2023
- Attended a 5 days Online FDP on “IMPORTANCE OF DATA SCIENCE organised by RV Institute of Technology and Management on 6th - 10th Feb, 2023
- Attended a 1 week FDP on "Quantum computing, Tools and its applications "organised Department of CST and Department of CSE, DSU on 13th - 17th Feb, 2023

Webinar

- Attended a Webinar on "Artificial Intelligence and the Metaverse" organised NIELIT, Delhi on 24th Feb, 2023

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

Faculty Development Program

- **Prof. Shivamma D has attended a 3 Days Faculty Development Program organised by Dayananda Sagar College of Arts, Science and Commerce, Bangalore on 18th to 20th January 2023**

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

FACULTY ACHIEVEMENTS

Contd.

- **Attended a 1 week Faculty Development Program-Deep Learning and its Application organised by MMCOE, Pune on 30 Jan- 4th Feb 2023**
- **Attended a 5 Days Faculty Development Program - "Importance Of Data Science In Machine Learning And Its Applications "organised by RV Institute of Technology and Management on 6th - 10th Feb, 2023**

Resource Person

- **Delivered technical talk on "Demystifying The Power Of Data Science" organised by DSCASC on 11th Feb 2023**

Certification

- **Rapid Miner Academy awarded certification in "Data Engineering Professional Certification" On February 17, 2023.**
- **Rapid Miner Academy awarded certification in " Data Engineering Master Certification" On February 17, 2023.**
- Rapid Miner Academy awarded certification in " Applications & Use Cases Professional Certification" On March 1, 2023.

Research Publication

- Shaila, S.G., Sindhu, A., **Shivamma, D.**, Suma Avani, V., Rajesh, T.M. (2023). Human Emotion Recognition Based on EEG Signal Using Deep Learning Approach. In: Mahapatra, R.P., Peddoju, S.K., Roy, S., Parwekar, P. (eds) Proceedings of International Conference on Recent Trends in Computing. Lecture Notes in Networks and Systems, vol 600. Springer, Singapore. https://doi.org/10.1007/978-981-19-8825-7_44
- **SG Shaila, D Shivamma**, US Monica, K Tejashree "Facial Expression Recognition for Compound Emotions using Mobile Net Architecture," 2022 International Conference on Artificial Intelligence and Data Engineering (AIDE), Karkala, India, 2022, pp. 187-190, doi: 10.1109/AIDE57180.2022.10060734.
- SG Shaila, VR Gurudas, L Monish, **D Shivamma**, N Sneha, Lekha Chowdary "Breast Cancer Detection based on Deep Neural Network using Multi-Model Features," 2022 International Conference on Artificial Intelligence and Data Engineering (AIDE), Karkala, India, 2022, pp. 92-95, doi: 10.1109/AIDE57180.2022.10059908.

"A cause worth fighting for is worth fighting for to the end" - William Swain Cleveland II

FACULTY ACHIEVEMENTS

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

Research Publication

- **Monish L**, Shaila SG, Rajesh TM, Sumana SG (Accepted)- "Piezoelectric Sensor-Based IoT Monitoring System for Apnea Disorder Prediction",(March) Elsevier, ATMA 2023
- Shaila SG, **Monish L**, Sumana SG (Accepted) - "Emotion Classification Based On Eeg Signals: A Comprehensive Study" in Emerging Research in Computing, Information, Communication and Applications" (ERCICA-2023), Springer.
- SG Shaila, VR Gurudas, **L Monish**, D Shivamma, N Sneha, Lekha Chowdary "Breast Cancer Detection based on Deep Neural Network using Multi-Model Features," 2022 International Conference on Artificial Intelligence and Data Engineering (AIDE), Karkala, India, 2022, pp. 92-95, doi: 10.1109/AIDE57180.2022.10059908.

Certification

- Rapid Miner Academy awarded certification in "Data Engineering Professional Certification" On February 01, 2023.
- Rapid Miner Academy awarded certification in " Data Engineering Master Certification" On February 24, 2023.
- Rapid Miner Academy awarded certification in " Applications & Use Cases Professional Certification" On March 3, 2023.

Faculty Development Program

- Attended a 1 Day Faculty Development Program on "Devops Engineering" organised by PHN Technology Pvt LTD on 4th Feb 2023
- Attended a 1 week FDP on "Quantum computing, Tools and its applications "organised Department of CST and Department of CSE, DSU on 13th - 17th Feb, 2023
- Attended a 5 Days Faculty Development Program - "Importance Of Data Science In Machine Learning And Its Applications "organised by RV Institute of Technology and Management on 6th - 10th Feb, 2023

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

FACULTY ACHIEVEMENTS

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

Certification

- **Prof. Sindhu A completed the online course "Getting Started with NodeJS" from SkillUp by Simplilearn on 31st January 2023.**
- Simplilearn awarded certification in " Artificial Intelligence certification" On March 28, 2023.

Research Publication

- Shaila, S.G., **Sindhu, A.,** Shivamma, D., Suma Avani, V., Rajesh, T.M. **(2023). Human Emotion Recognition Based on EEG Signal Using Deep Learning Approach. In: Mahapatra, R.P., Peddoju, S.K., Roy, S., Parwekar, P. (eds) Proceedings of International Conference on Recent Trends in Computing. Lecture Notes in Networks and Systems, vol 600. Springer, Singapore. https://doi.org/10.1007/978-981-19-8825-7_44**

Faculty Development Program

- **Attended a 1 week Faculty Development Program-Deep Learning and its Application organised by MMCOE, Pune on 30 Jan- 4th Feb 2023**
- **Attended a 1 Day Faculty Development Program on "Devops Engineering" organised by PHN Technology Pvt LTD on 4th Feb, 2023**

"The Data Speaks for itself. That's the easiest measure of success" - Caitlin Smallwood

FACULTY ACHIEVEMENTS

Prof. Vaishali B
Assistant Professor
Department of CSE (Data Science)

Faculty Development Program

- **Attended a 1 Day Faculty Development Program on "Devops Engineering" organised by PHN Technology Pvt LTD on 4th Feb 2023**
- **Attended a 1 week FDP on "Quantum computing, Tools and its applications "organised Department of CST and Department of CSE, DSU on 13th - 17th Feb, 2023**

Research Publication

- Abhishek Kumar,Saurav Kumar, **Prof Vaishali Bagewadikar**, Aman kumar,Rohan Kumar,(2023). A Comprehensive Study of Text Summerization : Techniques, Applications and Future Directions. INTERNATIONAL RESEARCH JOURNAL OF MODERNIZATION IN ENGINEERING AND TECHNOLOGY AND SCIENCE vol :05/issue:03

"Let's just see what happens' is not a scientific experiment." - Cassie Kozyrkov

STUDENT ACHIEVEMENTS

Ayesha Malaika, Adithya Challa and Varun N (6th Semester I section Dept. of CSE (DS)) won the Second Place in the Eni Act 2.0 event Inter Collegiate fest annual Syntaxia organised by the Cybernetics Association on 23rd and 24th February, 2023 at St Joseph's University

Pranav S S
6th Semester

Pranav S S (6th Semester I section, Dept. of CSE (DS)) has successfully completed 4 weeks of project from 23 January to 21 February 2023 under the Graphene Fellowship Programme.

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

RESULT ANALYSIS

3RD SEMESTER TOPPERS (2021 BATCH)

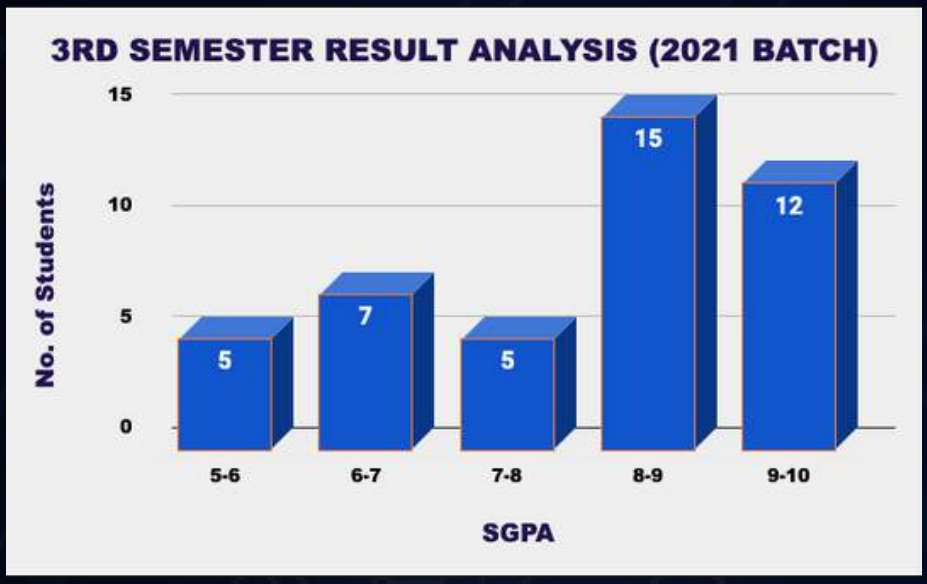
USN	NAME	SGPA
ENG21DS0002	ABHISHEK A	10
ENG21DS0006	AKSHAYA B	9.78
ENG21DS0020	GOLLA PUJARI SOWMYA	9.74
ENG21DS0003	ABHISHEK N	9.61
ENG21DS0046	V NIVAS REDDY	9.43
ENG21DS0035	SAMMANA BHAVANI PRASAD	9.35
ENG21DS0045	USHASHREE N	9.26
ENG21DS0014	CHAITHRA K	9.17
ENG21DS0044	THILAK R	9.13
ENG21DS0047	VINUTH GOWDA S	9.13

5TH SEMESTER TOPPERS (2020 BATCH)

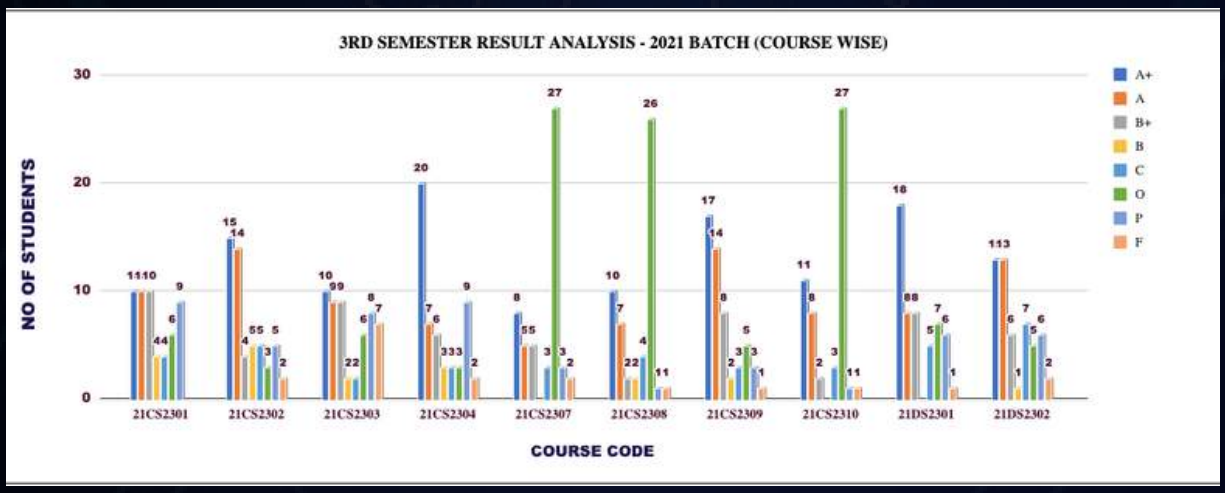
USN	NAME	SGPA
ENG20DS0002	ABHIRUCHI SANJAYKUMAR BHARAMBE	9.72
ENG20DS0044	VEDANTH V BALIGA	9.72
ENG20DS0048	YASHNA KARKERA	9.72
ENG20DS0030	PRANAV S S	9.44
ENG20DS0015	DHANUSHA R	9.4
ENG20DS0023	MANJU SWAROOP V	9.28
ENG20DS0022	M MADAN	9.2
ENG20DS0019	KEERTHANA HEBBAR R	9.16
ENG20DS0026	NANDINI HAZARIKA	9.08
ENG20DS0040	SUKRUTHA G	9

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

RESULT ANALYSIS (2021 BATCH)

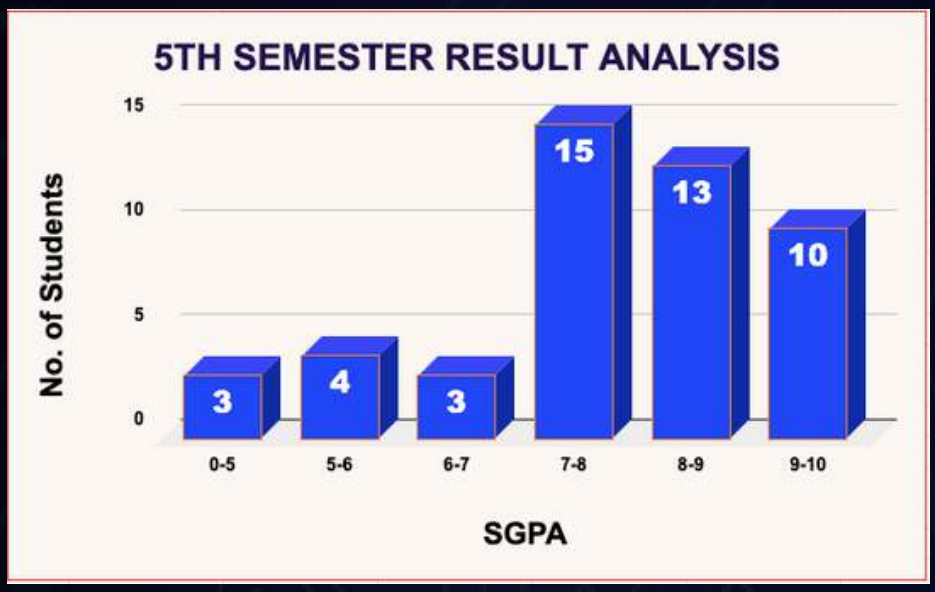


3RD SEMESTER RESULT ANALYSIS - 2021 BATCH (COURSE WISE)

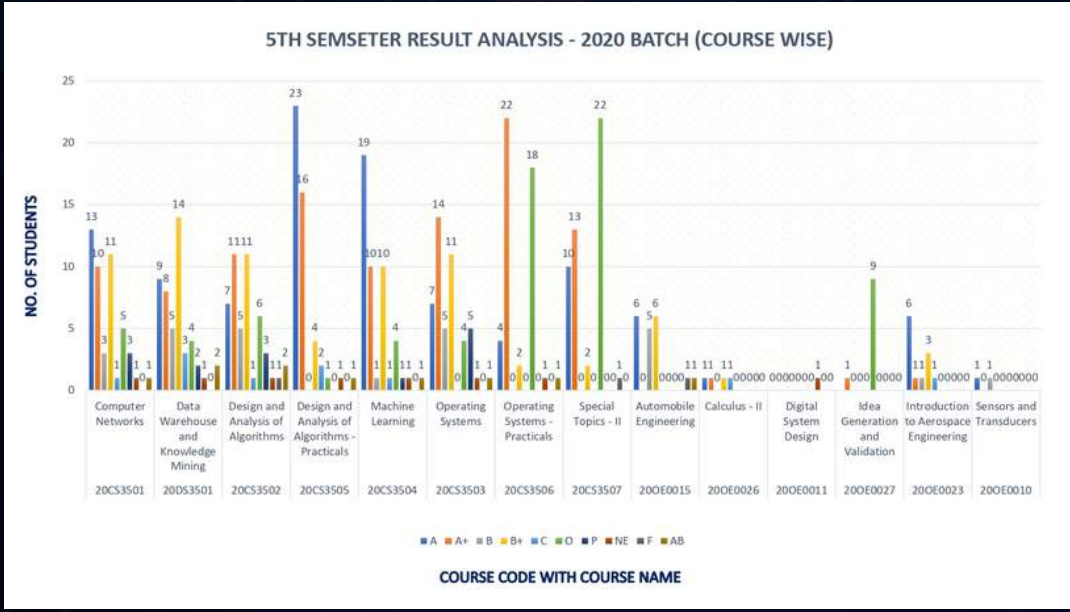


"Intuition is thinking that you know without knowing why you do." - Daniel Kahneman

RESULT ANALYSIS (2020 BATCH)



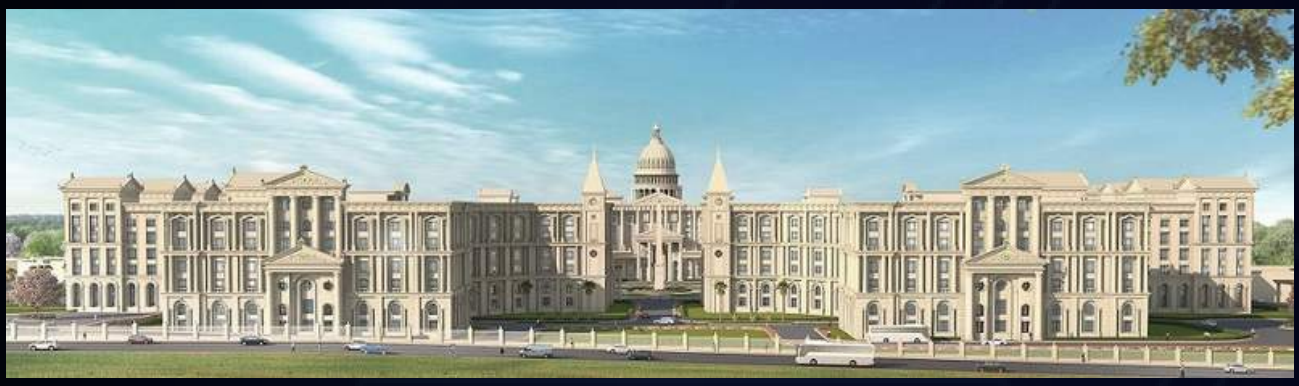
5TH SEMESTER RESULT ANALYSIS - 2020 BATCH (COURSE WISE)



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

GALLERY

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



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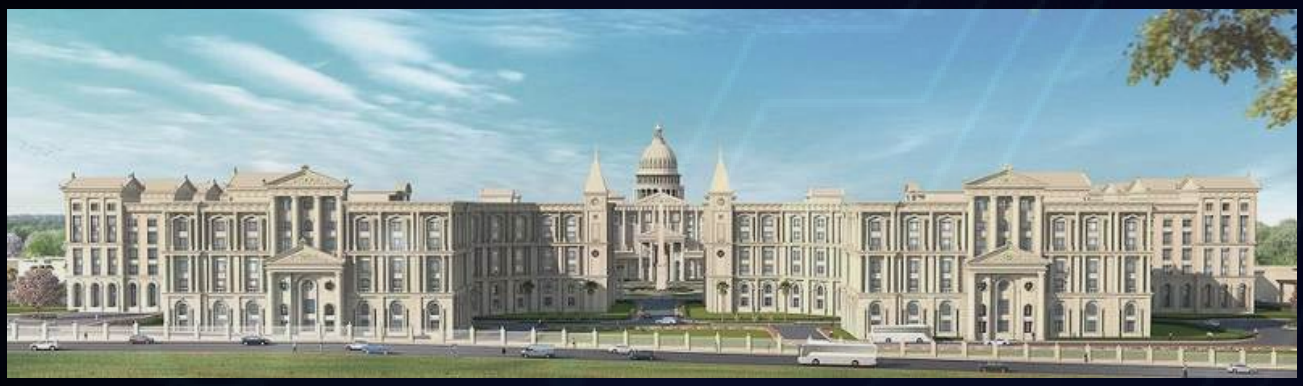
"Education is not the learning of facts, but the training of the mind to think"- Albert Einstein

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

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"The science of today is the technology of tomorrow" - Edward Teller