

Manipal University Jaipur

Dept. of Data Science and Engineering Official Newsletter

Vol. 1 Issue 2
April June 2024

Welcome Message

Welcome to the first edition of the newsletter “*EduJunction*” of the Department of Data Science and Engineering, School of Information Technology, MUJ. It gives us great pleasure to highlight some of the fascinating advancements and successes in the field of data science and engineering that our faculties and students.

Dept. of Data Science and Engineering formed in 2021 under school of Information Technology keeping in mind the current advancement and trend in the IT industry throughout the years.

At the Department of DSE, we are committed to advancing the frontiers of Data Science, Artificial Intelligence and Machine Learning in terms of research, education, outreach and collaborations. Our faculty consists of outstanding specialists in a variety of Data Science fields, making us a diversified and capable team. Along with cutting-edge research initiatives, internships, and competitions, we also offer a thriving and dynamic environment to students seeking undergraduate and graduate degrees in data science. This newsletter contains the most recent information about our department's accomplishments, activities, and news in addition to the experiences and viewpoints of our teachers and students...

Data science is the field in which various tools and methods from the fields of applied statistics, mathematics, and computer science are applied in order to gain greater insight and to make better and more informed decisions for a variety of purposes by analyzing a large amount of data.

The curriculum of the DSE program is designed to provide students with the fundamentals of applied statistics, applied mathematics, and computer science that are required in the context of data science and its applications. Additionally, the DSE program places a significant emphasis on students gaining hands-on experience through the use of practical, labs, and the experience of dealing with issues that are relevant to the real world.

I congratulate and convey my best wishes to every stockholder of Department of DSE and the entire editorial team on the launch of their first newsletter “*EduJunction*”.

~ Dr. Akhilesh Kr. Sharma, HoD, Dept of DSE



*“Information is the oil of the 21st century,
and analytics is the combustion Engine”*

Peter Sondergaard

(Senior Vice President and the Global Head of
Research at Gartner Inc)

Highlights

- Introduction to DSE Dept.
- Mission & Vision
- Academic programs
- Faculty Details
- Anova Club
- Industrial Visit
- ACM Community
- Academic MoUs
- Students Achievements
- Editor's Choice Student Article

Chief Editor:

Dr. Akhilesh Kr. Sharma, HoD,
Dept. of DSE

Editor:

Mr. Deevesh Chaudhary
Assistant Professor, Dept. of DSE

Student Editor:

Rashika Ranjan and Rajveer Singh

B.Tech Computer Science and Engineering(Data Science)trains engineering graduates to be skilled Data Scientists. The emphasis is on core data science subjects along with the related computational mathematics, statistics, and computer science subjects.

The program introduces students to the various application domains like finance, business, and healthcare wherein data science can be used to make informed decisions.

The course is a multi-campus model and promotes one-semester mandatory student mobility in 4/5/6th semester, between the MAHE Manipal, Manipal University Jaipur, and Sikkim Manipal Institute of Technology campuses. It is an eight-semester programme that helps software and IT professionals build the skillset required to advance their careers as Data Analysts, Data Engineers, Data Architects, and Data Scientists, among other roles. The programme covers fundamental to advanced skill and knowledge areas.

Data science is the field in which various tools and methods from the fields of applied statistics, mathematics, and computer science are applied in order to gain greater insight and to make better and more informed decisions for a variety of purposes by analyzing a large amount of data.

Vision

To prepare the next generation of practitioners and researchers with human values and ethics to thrive in a data-centric world.

Mission

- To establish the department as the epitome of motivation and guidance among aspiring engineers.
- To nurture academic, research, and professional excellence in the domain of Data Science and engineering.
- To transform young learners into competent data engineers by inculcating holistic values

Academic Programs

- B.Tech Computer Science and Engineering (Data Science)
- M.Tech Data Science

Program Educational Objectives (PEOs)

- **PEO1:** Graduates will follow analytical, problem solving and research-oriented approaches for solving real-world problems by providing AI based solutions.
- **PEO2:** Graduates will continue the process of lifelong learning by attaining professional certificates and seeking higher education.
- **PEO3:** Graduates will demonstrate the ability to establish, lead, and manage entrepreneurship ventures and startups in the field of Artificial Intelligence and Machine Learning.

Faculties of Department of DSE

Prof. (Dr.) Akhilesh Kumar Sharma

Dr. Devi Prasad Sharma

Dr. Sukhwinder Sharma

Dr. Dinesh Sharma

Dr. Aprna Tripathi

Dr. Rekha Chaturvedi

Dr. Chirag Joshi

Dr. Anju Susan George

Dr. Sudhir Sharma

Dr. Neha V Sharma

Dr. Ginika Mahajan

Mr. Deevesh Chaudhary

Mr. Gaurav Kumawat

Mr. Abhishek Dwivedi

Dr. Shipra Shukla

Ms. Shweta Redkar

Ms. Shatabdi Basu

Dr. Malvinder Singh Bali

Ms. Meenakshi Gaur

Dr. Dr. Srikanta Pradhan

Dr. Neeraj Kumar Verma

Student Achievement:

Ms. Aashi Sharma from **Section IV B** studying in the department of **Data Science and Engineering, SISDS, MUJ** has been honored with the "IEEE Delhi Section Student Network Award" during the IEEE Delhi Section Student Awards Ceremony 2024. The annual IEEE Delhi Section Student Awards Ceremony 2024 was conducted on Sunday, 26th May 2024 in physical mode at Jamia Milia Islamia, Okhla, New Delhi.



Events

AI/ML and Data Science for Industry 4.0 (Advanced Level)



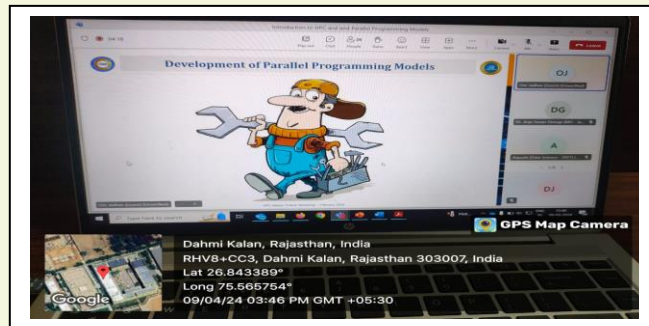
The event was conducted for five days having 13 sessions on various topics related to the theme of the Short Term Course, followed by Quiz and Feedback from the participants.

Essentials of Python and Open Libraries for AI/ML and Data Science, Anaconda Distribution, Jupyter Setup and Python Programming for AI/ML and Data Science

Membership Drive'23

" Sparkling with enthusiasm, Membership Drive transformed our campus into a vibrant hub '23 possibilities as students eagerly embraced memberships. A kaleidoscope of interests unfolded, creating a tapestry of diverse talents and passions. The campus buzzed with energy as students joined clubs, forging connections that promise to make this academic year unforgettable.

EXPERT LECTURE ON INTRODUCTION TO HPC AND PARALLEL PROGRAMMING MODELS



High performance computing (HPC) is the ability to process data and perform complex calculations at high speeds. It is through data that groundbreaking scientific discoveries are made, game-changing innovations are fuelled, and quality of life is improved for billions of people around the globe. HPC is the foundation for scientific, industrial, and societal advancements.

Parallel computing refers to the process of breaking down larger problems into smaller, independent, often similar parts that can be executed simultaneously by multiple processors communicating via shared memory, the results of which are combined upon completion as part of an overall algorithm. The primary goal of parallel computing is to increase available computation power for faster application

International Symposium for Data Science

A collaboration with the Data Science department resulted in 70 papers being submitted, with 30 presented. Over 200 concurrent viewers and faculty from all departments attended the event, providing valuable exposure to conducting such events. It also demonstrated the small research community and provided a platform for students to connect. Over two days, over 900 students and 130 faculty attended, with 29 of the 30 presenting their papers. This event showcased the importance of connecting with researchers and fostering a supportive environment.

INNOVATES



An event where individuals or teams showcase their completed projects, typically in the field of embedded systems. Attendees at a project exhibition can expect to see a wide range of projects and may have the opportunity to interact with the creators and ask questions about their work. A project exhibition is an opportunity for creators to share their work with a wider audience and gain recognition for their achievements.



AI BOT DEV



Students or developers compete in the 36-hour AI Bot Dev-An competition by writing code for a smart bot that answers a given problem. Programming languages and AI technologies such as computer vision, natural language processing, and machine learning are utilized by the participants. The bots have to be aware of their surroundings, make choices, and operate in a way that would lead to the desired outcome. The bots are judged on their effectiveness, innovation, quality, and usage of AI technology. Students who participate in the event display their skills, gain coding knowledge, and are inspired to be innovative and creative. This saw 168 participants from across the nation and was listed on Unstop.

"Aim for simplicity in Data Science. Real creativity won't make things more complex. Instead, it will simplify them" - Damian Duffy Mingle

Robo-Soccer



Robo-soccer is an exciting and captivating sport that involves robots competing against each other in a game of soccer. The event, which took place on 3rd March 2023, was a thrilling experience that lasted for three hours. The event featured several teams from different universities and research institutions, each with their unique robot designs and strategies. The robots were programmed to maneuver a soccer ball and score goals in a specially designed arena.

The event was not only entertaining but also a great showcase of the latest advancements in robotics. It demonstrated how robots can be programmed to perform complex tasks and work together in a team, paving the way for future applications in various industries.

Faculty Achievement



Dr. Sukhwinder Sharma, Associate Professor, Dept. of DSE, received 'Best Researcher Award' from Institute of Technical and Scientific Research and The Institution of Engineers (India) Rajasthan State Centre, Jaipur on May 19, 2024 at The Institution of Engineers (India) Rajasthan State Centre, Jaipur under the event ITSR FOUNDATION AWARD – 2024.

Dean's List Of Excellence In Academics Awards



Academic Visit

The department organized a noteworthy Academic visit to the MNIT,JAIPUR



Students Achievements



Kathan Desai (Reg. No. 209309064) started a startup named BUGBASE. Kathan has had past job as technical head at ACM club.

Brij Kishore Sharma won Innovate-X award at MUJ.

Rishav Agarwal won Ideathon - Innovation Blitz 2023 at Chandigarh Engineering College, CGC, landran, Mohali association with IIT Ropar

Academic MoUs

An academic MoU establishes a formal partnership between two or more academic institutions for the purpose of collaboration in research, education, training, or other areas of mutual interest. An academic MoU can also facilitate the exchange of faculty, students, information, and resources between the partner institutions.

- King Mongkut's University of Technology North Bangkok, Bangkok, Thailand
- Prince Sultan University, Riyadh, Saudi Arabia
- Altair Engineering India Pvt Ltd, Bengaluru
- Celebal Technologies Private Limited, Jaipur

Anova Technical Club

- ANOVA Student Data Science Club is a student-led technical club of Manipal University Jaipur. ANOVA is a place where curiosity meets computation and where possibilities are as limitless as the data one can explore. The club focuses on fostering interest, knowledge, and practical skills related to data science and analytics among students.

Students Scholarship

Students of DSE Dept. have received following scholarship scheme by MUJ for year 2023-24.

TMA Pai Merit Scholarships
Scholarships for the Wards of Single Mother
Scholarships for Students of Higher Semesters

Publications of DSE Dept.

Journal Publications: 8 (Jan 2024 – June 2024)

Patents Published: 1 (Jan 2024 – June 2024)

"Data and data science greatly influence everything we do...The impact that data has and will have...continues to grow every day." - Ronald van Loon

