



**A Report on Five Days National Level Online Faculty Development Program on
 “Unlocking Industry Insights in Data Science – (UIIDS-2024)”
 Organized by Department of Computer Science Engineering – (Data Science)
 February 12, 2024 – February 16, 2024**

Madanapalle Institute of Technology & Science
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 NAAC Accredited with A+ Grade, NIRF India Rankings 2021 - Band: 201-250 (E) (Igg.)
 UGC Approved - B Tech (CSE), CSE, ECE, EEE, MECH, MBA & MCA
 Madanapalle-517325, Annamayya(Dt.), Andhra Pradesh, India

**Five Day National level Online Faculty Development Programme on
 “UNLOCKING INDUSTRY INSIGHTS IN DATA SCIENCE”**
 organised by
**Department of
 Computer Science & Engineering - (Data Science)**
12th – 16th February 2024

Chief Patron Dr. N. Vijaya Bhaskar Choudary, Ph.D Secretary & Correspondent	Patron Mrs. Keerthi Nadella Executive Director	Program Chair Dr. C. Yuvaraj Principal	Co-Chair Dr. S. Kusuma HOD, Dept. of CSE-(DS)
Convener Dr. K. Lokeshwaran, Asst. Prof., Dept. of CSE-(DS)	Co-Ordinator Mrs. Manjula Prabakaran Asst. Prof., Dept. of CSE-(DS)	Co-Ordinator Mr. G. Kiran Kumar Asst. Prof., Dept. of CSE-(DS)	

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Report Submitted by: Mrs. Manjula Prabakaran, Assistant Professor, Department of CSE- (Data Science), MITs & Mr. G. Kiran Kumar, Assistant Professor, Department of CSE- (Data Science), MITs

Total Participants: 525 Participants from all over India

Resource Persons Details: Day-1 --- Mr. Naveen Kumar. G, Chargebee Technologies, Chennai; Mr. Naveen Kumar Chinnireddy, Infosys, Hyderabad.

Day -2 ---Mr. Sundarrajan. R, BNY Mellon, Chennai; Mr. Sreekar Sai P, dotKonnekt, Bengaluru (World Skills Representative for India – Cloud Computing)

Day-3 ---Mr. Noah Franklin, Tech Mahindra, Bengaluru; Dr. Elaiyaraja Karthikeyan, MSP (Eagle Software India Pvt Ltd.), Chennai.

Day-4 ---Mr. Mohammed Kabir Shabhir Ahmed, Beebag.Co., Malaysia; Mr. Lakshminarayana, Strydo Technologies, Tirupathi.

Day-5 ---Mr. Rameshkumar Subramaniyan, Walmart Global Tech India, Chennai; Mr. Aswath M, Infosys, Chennai.

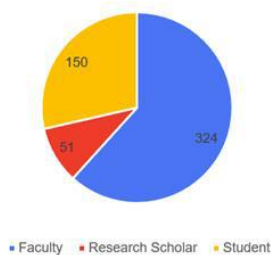
About the FDP

“Unlocking Industry Insights in Data Science” is a dynamic and comprehensive faculty development program designed to empower educators with the latest knowledge and skills required to bridge the gap between academia and industry in the field of data science. Through in-depth sessions on cutting-edge tools, ethical considerations, and practical applications, participants will gain valuable insights into the real-world challenges and opportunities in industries leveraging data science. This program combines theoretical foundations with hands-on experiences, equipping faculty members to guide students toward impactful contributions in industry settings. Join us in unlocking the full potential of data science education and preparing the next generation of professionals for successful careers in the ever-evolving landscape of industry-driven data science.

State	Count
Andhra Pradesh	154
Chhattisgarh	3
Gujarat	1
Karnataka	74
Kerela	4
Maharashtra	7
Punjab	2
Puducherry	1
Rajasthan	3
Telangana	67
Tamil Nadu	204
Tripura	1
Uttar Pradesh	3
West Bengal	1
Total	525

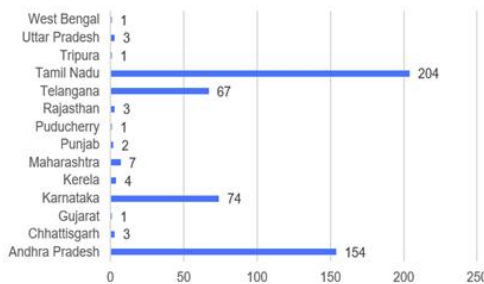
Participants Category Wise Distribution

Participants Category Wise Count



Geographic Distribution of Participants

State Wise Participants Count



Participant Type	Count
Faculty	324
Research Scholar	51
Student	150
Total	525

Inauguration Ceremony

The Department of Computer Science and Engineering (Data Science) successfully hosted a National Level Faculty Development Program (FDP) titled "**Unlocking Industry Insights in Data Science**" from **February 12 to February 16, 2024**. This prestigious event was conducted on an online platform and attracted an impressive turnout of 525 participants from all over India, encompassing faculty members, dedicated research scholars, and enthusiastic students from across India.

The FDP commenced at 10:00 AM on February 12, with an initial attendance of 295 participants. The Vice Principal, Dr. K. Ramanathan, honored the event with a felicitation address. His presence and words lent a sense of importance and prestige to the proceedings. Dr. Ramanathan expressed his best wishes for all attendees, encouraging them to fully engage with the FDP and absorb new knowledge and insights.

Following the Vice Principal's address, Dr. S. Kusuma, the esteemed Head of the CSE-DS Department, delivered a warm and insightful welcome. She highlighted the significance of the program and emphasized the critical role of Data Science in shaping the modern world. Her remarks set the tone for the event, underscoring its relevance and the valuable opportunities it presented for learning and growth.

Dr. K. Lokeshwaran, Assistant Professor in the CSE-DS Department, then provided a detailed overview of the FDP sessions planned for the duration of the program. His introduction set the stage for an enriching learning experience, outlining the comprehensive and diverse topics to be covered.

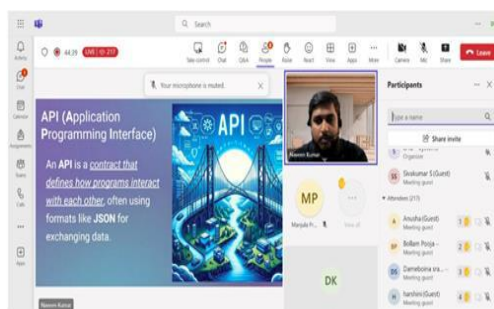
Mrs. Manjula Prabakaran, also an Assistant Professor in the CSE-DS Department, introduced the resource persons who would be leading the sessions. Her introduction of the esteemed speakers promised a program rich in expertise and industry insights, further enhancing the anticipation and excitement among the participants.

This Faculty Development Program stands as a testament to the department's commitment to fostering educational excellence and advancing the field of Data Science. It provided a unique platform for participants to explore the latest trends, technologies, and methodologies in Data Science, thereby contributing significantly to their professional development and the broader academic community.

Day 1: 12/02/2024

Session – I by Mr. Naveen Kumar. G, Chargebee Technologies, Chennai.

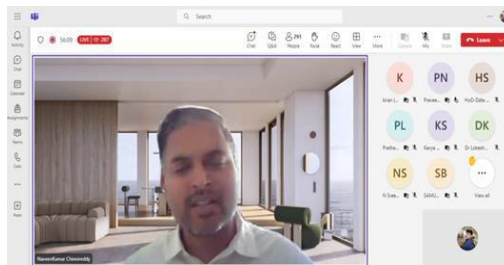
Topic: Mastering Spring Boot: Building, Security, Testing & RESTful APIs



This session covered the fundamental aspects of Spring Boot, including efficient application building through convention over configuration, ensuring security to protect against vulnerabilities, comprehensive testing strategies to maintain code quality, and the creation of RESTful APIs for seamless service integration. The program emphasized practical knowledge with demonstrations, focusing on leveraging Spring Boot's capabilities to streamline application development, enhance security measures, ensure robust testing methodologies, and implement efficient RESTful APIs, equipping participants with the skills necessary to excel in modern software development projects.

Session – II by Mr. Naveen Kumar Chinnireddy, Infosys, Hyderabad.

Topic: Coding & Security in the era of AI: Is GitHub Copilot your new Teaching Assistant?

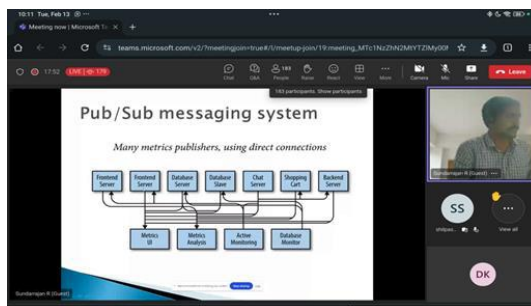


An expert in the field guided the audience through an exploration of GitHub Copilot, showcasing its capabilities as an AI-powered coding companion that suggests code snippets and entire functions in real-time. The discussion extended to the security considerations inherent in relying on AI for coding, including the potential for introducing or overlooking vulnerabilities. The session, enriched with practical examples and a live demonstration of Copilot in action

Day 2: 13/02/2024

Session – I by Mr. Sundarrajan. R, BNY Mellon, Chennai.

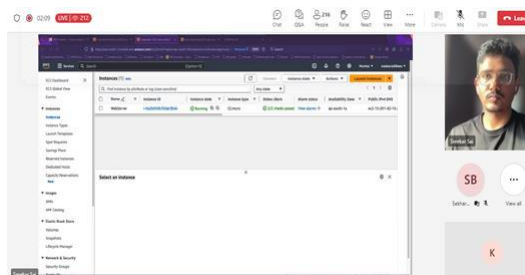
Topic: Kafka messaging system in Data Science.



In this session we explored the pivotal role of Apache Kafka, a real-time, distributed messaging system, in handling large-scale data flows within the data science ecosystem. An authority in data engineering provided a comprehensive overview of Kafka's architecture, its publish-subscribe messaging model, and how it facilitates the efficient processing and analysis of big data in real time. The session highlighted Kafka's integration with data science workflows, demonstrating its utility in streaming data pipelines, real-time analytics, and building scalable data processing systems. Through practical demonstrations and case studies, the speaker illustrated Kafka's impact on enhancing data-driven decision-making and operational efficiency.

Session – II by Mr. Sreekar Sai P, dotKonnekt, Bengaluru (World Skills Representative for India – Cloud Computing)

Topic: Cloud Computing Unveiled: A Journey from Studies to Workplace.



This session embarked on an enlightening exploration of cloud computing's transformative impact on both academic learning and professional development. A distinguished expert in cloud technologies guided participants through the fundamentals of cloud computing, shedding light on its core concepts, service models (IaaS, PaaS, SaaS), and deployment models (public, private, hybrid). The session emphasized the practical applications of cloud computing in real-world scenarios, illustrating how these technologies are employed across various industries to drive efficiency, scalability, and innovation. Attendees were introduced to the skills and knowledge necessary to navigate the cloud computing landscape, bridging the gap between academic studies and workplace demands

Day 3: 14/02/2024

Session – I by Mr. Noah Franklin, Tech Mahindra, Bengaluru.

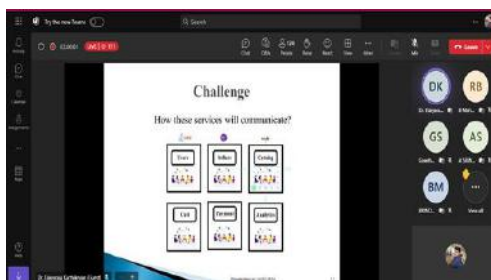
Topic: Unboxing Cyber Security Secrets in Data Science



The resource person explained about the intricate relationship between cybersecurity and data science, uncovering the crucial role that data science plays in enhancing cyber defense mechanisms. A cybersecurity expert with deep knowledge of data science methodologies led the session, illustrating how data analysis techniques are pivotal in detecting, analyzing, and preventing cyber threats in an increasingly digital world. The discussion covered advanced topics, including machine learning models for anomaly detection, data encryption for secure data storage and transmission, and the ethical considerations in handling sensitive data. Through real-world examples and case studies, the speaker demonstrated practical applications of data science in identifying vulnerabilities and fortifying cybersecurity measures.

Session – II by Dr. Elaiyaraja Karthikeyan, MSP (Eagle Software India Pvt Ltd.), Chennai.

Topic: Microservices of Spring Boot

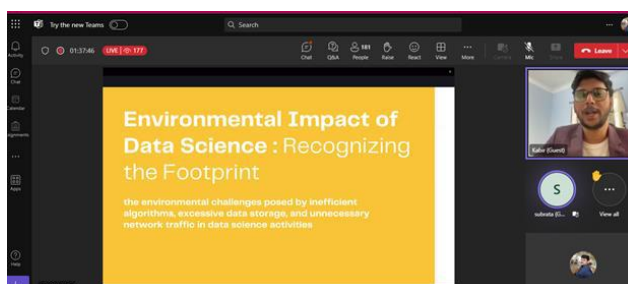


This session offered a deep dive into designing, developing, and deploying microservices using Spring Boot's comprehensive suite of tools. Participants were introduced to the fundamentals of microservices architecture, including its advantages over monolithic designs, such as increased agility, scalability, and the ease of deploying independent service components. Expert covered key Spring Boot features that facilitate microservices development, such as auto-configuration, standalone deployment capabilities, and its support for cloud-native applications. Through hands-on exercises, attendees learned how to create their microservices, communicate between services using Spring Cloud, and implement best practices for security and resilience.

Day 4: 15/02/2024

Session – I by Mr. Mohammed Kabir Shabhir Ahmed, Beebag.Co., Malaysia.

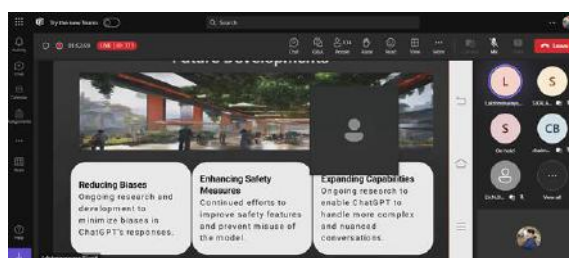
Topic: Environmental Impact of Data Science: Recognizing the Footprint



This session was led by an environmental expert with a keen interest in sustainable technologies, the session shed light on how data science operations, from data centers to algorithmic processing, contribute to energy consumption and carbon emissions. The conversation navigated through the balance of leveraging data science for environmental benefits, such as climate modeling and resource management, against its carbon footprint. Practical solutions for reducing energy use, such as optimizing algorithms for efficiency and adopting green computing practices, were thoroughly examined. Attendees were encouraged to consider sustainability in their data science projects, making the FDP a pivotal moment for raising awareness about the environmental responsibilities of data scientists.

Session – II by Mr. Lakshminarayana, Strydo Technologies, Tirupathi.

Topic: AI and ChatGPT Applications.



An AI expert led the discussion, highlighting the revolutionary capabilities of ChatGPT in understanding and generating human-like text, which opens up new avenues for automation, customer service, content creation, and more. The session delved into the technical underpinnings of ChatGPT, including its training on vast datasets to perform a variety of tasks, from composing emails to writing code. Practical demonstrations showcased ChatGPT's versatility in real-world scenarios, illustrating how businesses and individuals alike can harness its power to enhance efficiency and innovation.

Day 5: 16/02/2024

Session – I by Mr. Rameshkumar Subramanian, Walmart Global Tech India, Chennai.

Topic: AWS Adventure: Mastering the cloud, EC2 and Storage.

Rameshkumar seasoned AWS professional led this session, he demystified the core services of AWS, with a special emphasis on Elastic Compute Cloud (EC2) and AWS's storage solutions, such as S3 and EBS. Participants were introduced to the principles of cloud computing, the advantages of EC2 instances for scalable computing power, and the versatility of storage options for various application needs. Through

live demonstrations and hands-on exercises, attendees gained practical experience in configuring EC2 instances, managing storage, and understanding best practices for security and cost-efficiency.



Session – II by Mr. Aswath M, Infosys, Chennai.

Topic: Data Bricks

Attendees were guided through the core features of Databricks, including its collaborative notebooks, integrated workflows, and the ability to process massive datasets with ease, thanks to its optimized Apache Spark environment. The presentation highlighted how Databricks accelerates innovation by allowing data scientists, engineers, and business analysts to work collaboratively on shared data. Through practical examples, participants learned how to leverage Databricks for real-time analytics, machine learning model development, and streamlined data processing pipelines. The FDP was concluded with a lively Q&A session, providing attendees with a deeper understanding of how to utilize Databricks to drive data-driven decisions and foster a culture of innovation within their organizations."

Valedictory: 16/02/2024 (4.00 PM to 4.15 PM)

In valedictory Mrs. Roopa, Assistant Professor, CSD, emphasized the invaluable contributions of everyone involved, noting that the success of the Faculty Development Program was a testament to the collective commitment to excellence in education. She expressed optimism about the future, envisioning how the insights gained would translate into enriched learning experiences for students and a strengthened curriculum. Her closing words, imbued with gratitude and foresight, underscored the profound impact of the program on fostering a culture of innovation and continuous growth within the academic community.

The outcome of the FDP:

The outcome of this Faculty Development Program (FDP) titled "Unlocking Industry Insights in Data Science" is likely to be multifaceted, bringing about several positive impacts for the participants, the department, and the broader academic and professional community. Some potential outcomes include:

1. **Enhanced Knowledge and Skills:** Participants would have gained in-depth insights into various aspects of Data Science, including Spring Boot development, security practices, coding in the era of AI, Kafka messaging system, cloud computing, cyber security secrets, microservices, sustainable solutions, AI applications, and Data Bricks.
2. **Professional Development:** The FDP, featuring distinguished speakers from reputable organizations, contributes to the professional development of the participants. Exposure to real-world industry practices and the latest trends in Data Science can significantly enrich their skill sets.
3. **Networking Opportunities:** Interaction with experts and peers from diverse backgrounds provides valuable networking opportunities. Participants can establish connections that may lead to collaborations, research partnerships, or future professional engagements.
4. **Industry Relevance:** The FDP's focus on industry insights ensures that the knowledge imparted aligns with current industry demands. This ensures that participants are well-prepared for the practical challenges and expectations of the professional world.
5. **Application of Learning:** The practical sessions and real-world case studies presented during the FDP enable participants to apply theoretical knowledge in practical scenarios. This hands-on experience is crucial for bridging the gap between academic understanding and real-world application.
6. **Enriched Teaching Methods:** Faculty members who attended the FDP can bring back innovative teaching methods and contemporary industry practices to their classrooms. This contributes to the overall improvement of the quality of education imparted by the department.
7. **Increased Visibility:** The success of the FDP, featuring renowned speakers and covering diverse topics, can enhance the department's reputation. This increased visibility may attract more opportunities for collaboration, research projects, and sponsorships.
8. **Inspiration for Research:** Exposure to cutting-edge topics and industry applications may inspire faculty and research scholars to explore new research avenues, contributing to the academic advancement of the department.

In essence, the FDP is likely to have a positive and lasting impact on the participants and the department, fostering a culture of continuous learning, innovation, and collaboration within the realm of Data Science.