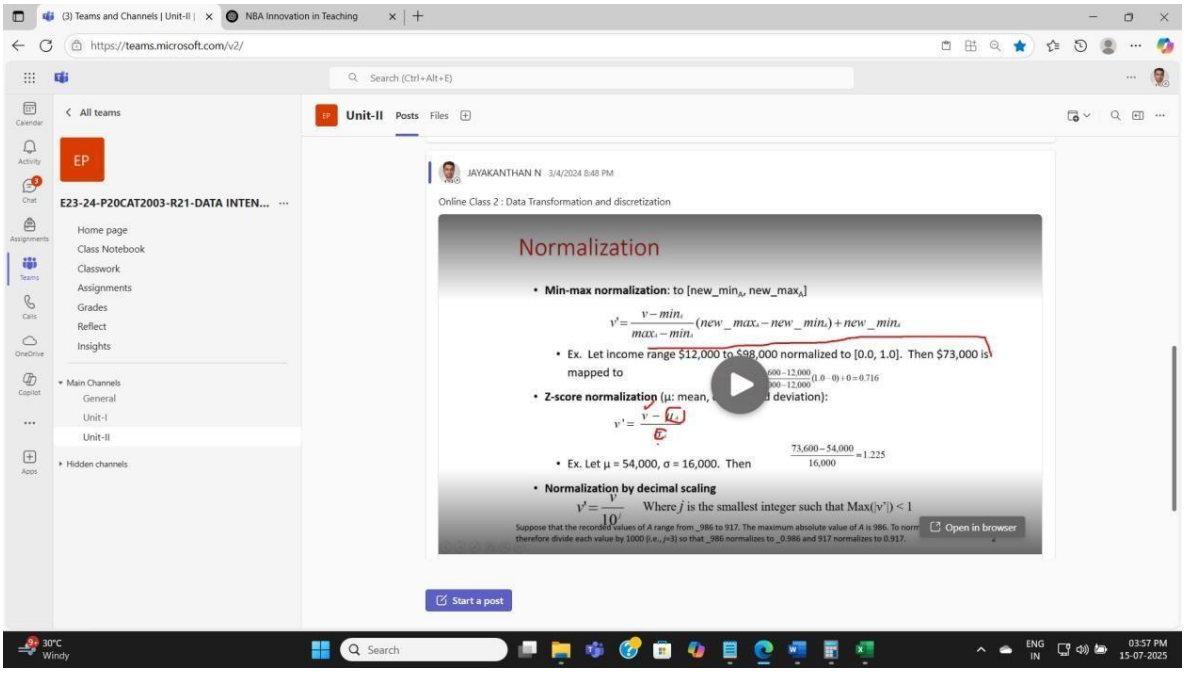
DEPARTMENT OF COMPUTER APPLICATIONS

Innovation by Faculty in Teaching and Learning

- Asynchronous video lectures have been effectively employed to enrich teaching and learning in the course **P20CAT2003 – Data Intensive Computing**. This approach enables flexible, self-paced learning and allows students to revisit complex topics for deeper comprehension. A series of well-structured video sessions were developed and shared via Microsoft Teams, covering both foundational and advanced topics such as **Data Types**, **Linear Regression with Example**, **FP-Growth Algorithm**, **Data Visualization**, and **Data Transformation and Discretization**. These lectures integrate clear explanations, real-world examples, and ICT-enabled content delivery to support diverse learning styles and reinforce conceptual clarity. In particular, the session on **Data Transformation and Discretization** significantly strengthened students' understanding of key data preprocessing techniques and contributed to improved performance in Unit II assessments. The integration of these asynchronous resources reflects a student-centred, technology-enhanced pedagogy aimed at improving academic outcomes.

🚩 Lecture Videos:

- **Data Types** – 2.Data Types.mp4
- **Linear Regression with Example** – 3.8.Linear regression with example.mp4
- **FP-Growth Algorithm** – 3.FP Growth algorithm.mp4
- **Data Visualization** – 3.FP Growth algorithm.mp4
- **Data Transformation and Discretization** – P20CAT2003 Data Intensive Computing_Data Transformation By Normalization.mp4



Asynchronous video lecture

- The professional integration of smart classroom infrastructure—such as the Sense Board (Smart Board)—significantly enhances syllabus coverage, fosters interactive learning, and supports the effective delivery of complex technical content. By enabling dynamic visuals, real-time annotations, and step-by-step demonstrations, the Smart Board transforms conventional teaching methods into more engaging and impactful learning experiences. This technology-driven approach promotes deeper conceptual understanding, accommodates diverse learning styles, and encourages active participation, making it an effective tool for modern, student-centred education.

Enhancing Conceptual Learning through Smart Board Integration in the Classroom

- MCA department students participated in ProtoSem, an experiential learning program by Forge Academy that fosters innovation and real-world problem-solving skills.

- Students are grouped into various cohorts, such as Web Development, Artificial Intelligence, Data Science, Augmented Reality (AR), and Virtual Reality (VR), with skill enhancement activities like workshops conducted for them. These cohorts promote collaboration, real-world projects, and industry-led sessions, enhancing technical and problem-solving skills. This hands-on approach equips students with expertise in emerging technologies and prepares them for industry challenges.

Comprehensive DevOps Training Program Organized by Web and Software develop Cohort from 24.12.2024 to 27.12.2024.

Cybersecurity Cohort hosted the "Coimbatore Chapter Combined Meetup" on December 21, 2024.

The three-day Faculty Development Program titled "Accelerating Edge AI: From Concept to Deployment with Jetson Nano", organized by the IoT, Edge & UAV Cohort 21.12.2024.

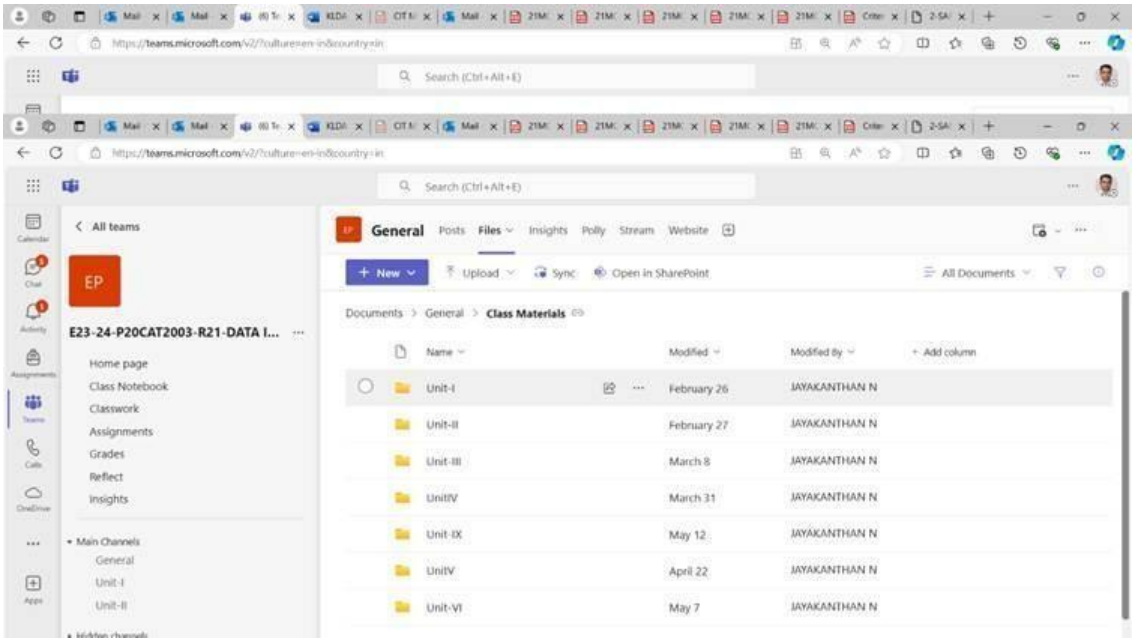
- As part of our curriculum, the events like Blockchain yatra was conducted to explore the captivating Blockchain Story and its impact.

Bharat Blockchain Yatra on September 25, 2023,

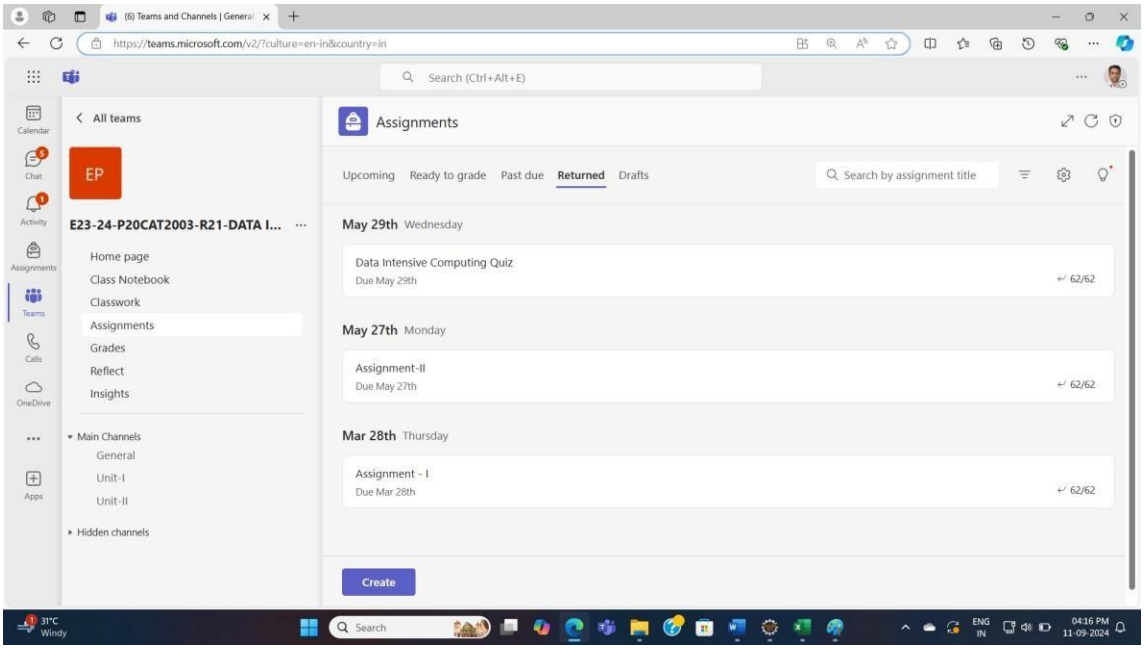
- The department is having MOUs with industries and frequent events like seminars and Hackathons are conducted as part it.

MoU signed with Wise Work on 8/11/2023!

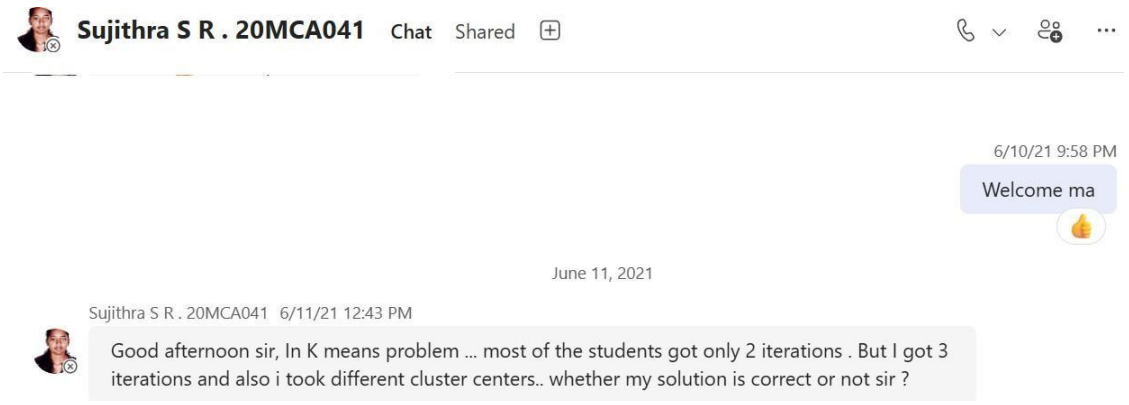
- Students free to discuss problems by interacting with faculty through online platforms.
- Engineering Clinics – Students actively engage in multidisciplinary projects, collaborating across various engineering domains to apply theoretical knowledge, develop innovative solutions, and gain hands-on experience in real-world problem-solving.
- Students are encouraged to pursue certification courses to enhance their skills and broaden their knowledge in relevant domains.
- ICT tools are effectively integrated into the teaching and learning process to foster innovation and enhance educational outcomes.



Posting the teaching materials to facilitate flipped classroom mode.



Posting of assignments and manage the submissions online



Interacting with students

- Faculty incorporate real-world case studies into the curriculum, allowing students to analyze practical situations, apply theoretical knowledge, and develop problem-solving skills relevant to industry challenges.

- Faculty design instructional activities around realistic scenarios, encouraging students think critically, make informed decisions, and apply concepts to practical problem-solving.

Enhancing Innovative Teaching through Faculty Publication

- To foster innovation in teaching and learning, Dr. N. Jayakanthan has authored a book titled ***"Malicious URL Detection – Introduction"***, published by **Pencil (One Point Six Technologies Pvt Ltd)** and available on **Amazon**. This book supports students in understanding and applying concepts of **cybersecurity, machine learning, and real-world threat detection**.

- The book is used as a **supplementary learning material** in relevant courses to:
  - Facilitate hands-on project development,
  - Promote interdisciplinary and self-paced learning,
  - Support curriculum enrichment with practical examples.
  - Amazon Listing:
    The book is officially listed on Amazon and can be accessed through the following link
    Buy Malicious URL Detection - Introduction Book Online at Low Prices in India | Malicious URL Detection - Introduction Reviews & Ratings - Amazon.in
- **Screenshots from Amazon:**
  - Book cover and listing

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- Sample reviews and ratings
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- As part of their academic contributions, **Ms. V. Jalaja Jayalakshmi, and Dr. C. Rajankrupa** have jointly authored the book titled *“Information Security”*, published as a **Perfect Paperback in January 2024** and listed on **Amazon**. The book offers comprehensive coverage of cybersecurity fundamentals, focusing on secure systems, data protection, and risk management practices.

- The publication serves as a valuable academic resource and is integrated as supplementary learning material in relevant courses to:

- Enhance students’ understanding of information security frameworks and practices,
- Encourage applied learning through real-time case studies and examples,
- Promote self-paced and interdisciplinary learning approaches,
- Contribute to curriculum enrichment with practical applications of cybersecurity concepts.

- **Amazon Listing:**
  Buy *Information Security* Book Online at Low Prices in India | *Information Security* Reviews & Ratings - Amazon.in

- **Screenshots from Amazon:**

  - Amazon Listing:
    The book is officially listed on Amazon and can be accessed through the following link
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