Date:10-05-2024

Technical Talk on "Introduction to Machine Learning and Image Processing"

Name of the Program:	Expert talk on ""	Program Dates & Timings:		10.05.2024 9.00AM- 1.00PM	
Name & Details of the Resource Person:	**Risha, Ramitha, Sudeeksha, Prajna Shivani, Thashvy, Gaurav B S, Himmath, Likith, Shreenikethan** 3rd Year, Information Science and Engineering, AJIET, Mangaluru				
Organized by (Clubs/ Dept.)	Department of Information Science and Engineering	In Association with (clubs)		Hieka	
Number of Participants	57	Students	57	Faculty	11
Program Outcome (PO) Mapping	PO1, PO2, PO3, PO4, PO7, PO11				
Coordinators	Mrs.Arpitha G				
Faculty Participated	Mr. Prabhakara B. K., Mr. John Prakash Veigas, Mr. Rakesh M R, Mrs. Sharanya P S, Mrs. Navya S Rai, Mrs. Divya Mrs. R. Sahaya Shamini, Mrs. Archana Priyadarshini Rao				

About the Talk

The session on introducing participants to machine learning provided a comprehensive overview of ML as a leading field for developing intelligent systems. Attendees were immersed in the foundational principles of machine learning, delving into its core features and elucidating its myriad advantages in the realm of data-driven decision making. Throughout the session, participants were equipped with a deep understanding of machine learning's architecture, which underpins its robust performance and versatility across different applications. By exploring machine learning's algorithm-based approach to data analysis, attendees grasped the flexibility and efficiency offered by this field in creating predictive and adaptive systems. Students were also exposed to aptitude and questions which gave them an idea of the industry level knowledge required.

Key Topics Covered:

- Introduction to Machine Learning: Its origin and its purpose.
- Data Preprocessing: Data preprocessing is the crucial initial step in the machine learning workflow that involves transforming raw data into a clean and usable format.
- Supervised Learning: Regression (linear regression, polynomial regression), Classification (logistic regression, decision trees, support vector machines, k-nearest neighbors), Performance metrics (accuracy, precision, recall, F1-score, ROC-AUC)
- Unsupervised Learning: Clustering (k-means, hierarchical clustering, DBSCAN), Dimensionality reduction (PCA, t-SNE, LDA), Anomaly detection

About the Program:

Agenda:

Sl No.	Topic	Speaker
1	Talk on "Introduction to Machine Learning and Image Processing"	Risha, Ramitha, Sudeeksha, Prajna Shivani, Thashvy, Gaurav B S, Himmath, Likith, Shreenikethan

The Department of Information Science and Engineering in organized a technical talk on "Introduction to Machine Learning and Image Processing " on 10/05/2024.

Objectives:

1.Prediction: Machine learning aims to develop models that can accurately predict future outcomes or events based on historical data.

2. Classification: It involves categorizing data into different classes or groups based on their features or characteristics.

3. Clustering: Machine learning helps in identifying patterns and grouping similar data points together without any predefined labels.

4. Anomaly detection: It focuses on identifying unusual or abnormal observations in a dataset that may indicate fraudulent activities, errors, or outliers.

5. Pattern recognition: Machine learning algorithms can learn patterns and relationships in data, allowing them to recognize and interpret complex patterns or structures.

6. Optimization: It involves finding the best possible solution or configuration for a given problem by optimizing specific parameters or objectives.

7. Personalization: Machine learning enables systems to personalize user experiences by understanding individual preferences and making recommendations accordingly.

8. Automation: By automating tasks and decision-making processes, machine learning helps in improving efficiency, reducing human effort, and minimizing errors.

9. Natural Language Processing: Machine learning techniques are used to understand and process human language, enabling applications like chatbots, voice assistants, and language translation.

10. Image and Speech Recognition: Machine learning algorithms can analyze and interpret images, videos, and speech, enabling applications like facial recognition, object detection, and speech-to-text conversion.

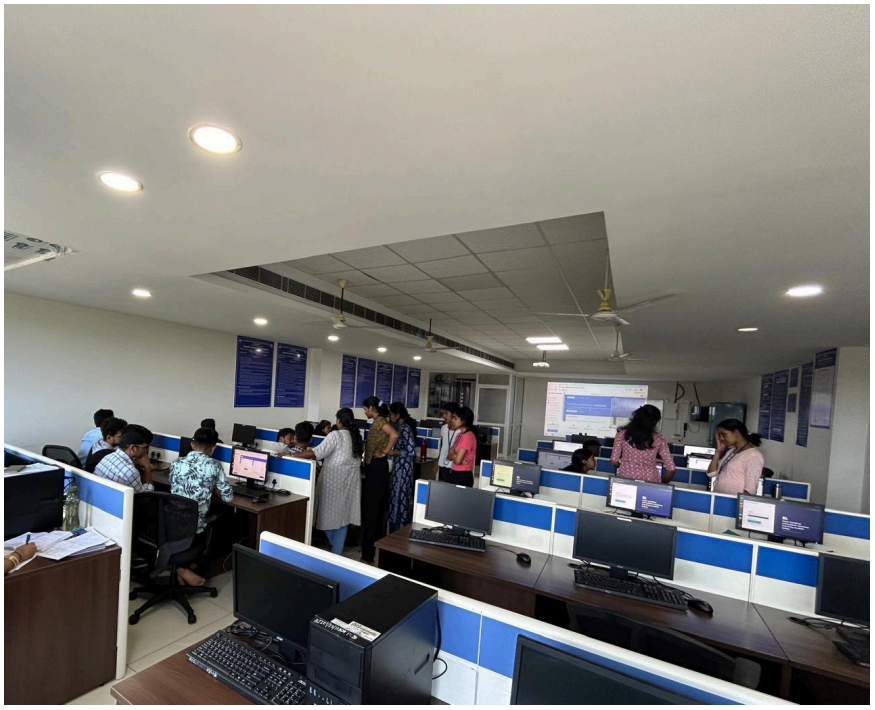
Outcomes:

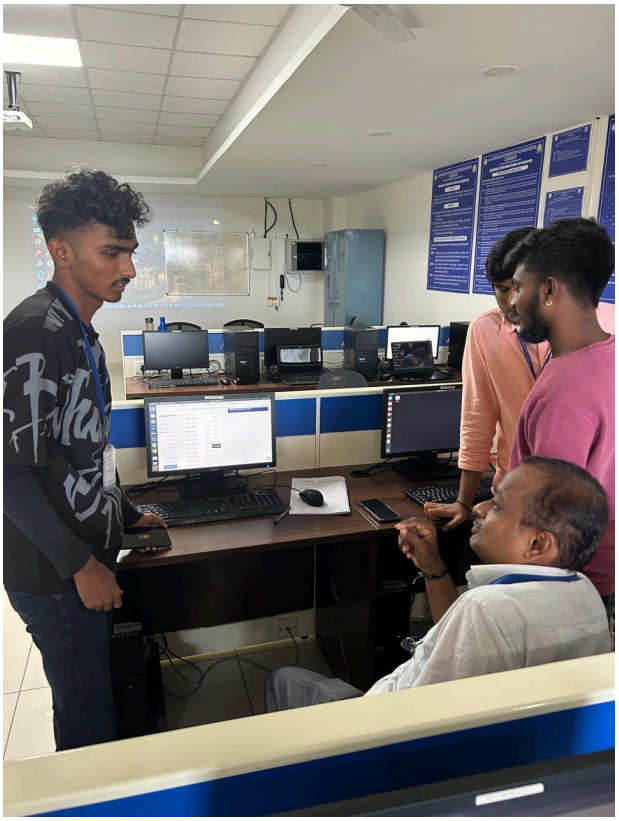
- Participants gained a comprehensive understanding of Machine learning.
- Increased awareness about the advantages of machine learning. Attendees acquired practical skills in edge impulse.
- Stimulated interest among participants to explore further into the realm of machine learning.

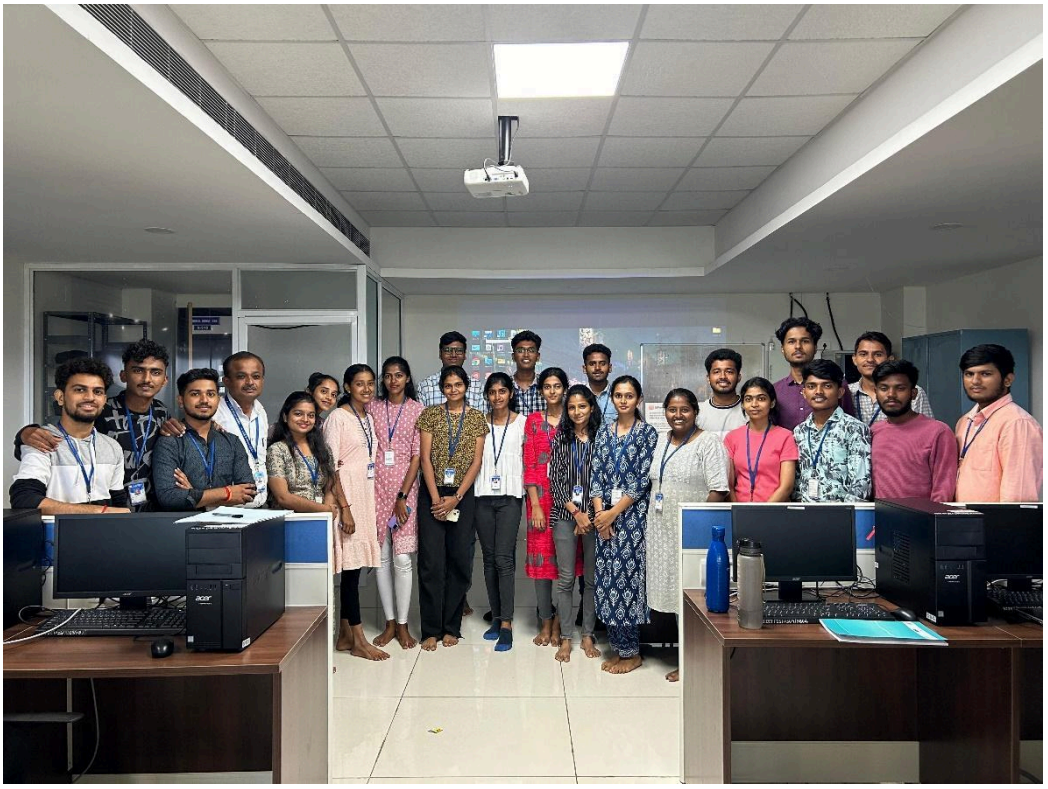
Articulation Matrix:

Course Outcomes	Program Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	2		3						1	
2	2	3	1		2							
3	1		3	2								
Average	2	3	3	2	3						1	

Glimpses of Event:







Coordinator HOD Principal