

Date: 11/08/2025

**REPORT ON “PROMPT ENGINEERING, AI WORKFLOWS, AI APPLICATIONS AND THE WAY FORWARD”**

<b>Name of the Program:</b>	<b>Prompt Engineering, AI workflows, AI applications and the way forward</b>		<b>Program Dates &amp; Timings:</b>		09/08/2025 09:00 AM to 04:00 PM	
<b>Name &amp; Details of the Resource Person:</b>	Mr. Jayaraj Pergade Director Mayonix Innovations Pvt Ltd					
<b>Organized by</b>	Dept. of CSE and ISE		<b>In Association with (clubs/Dept.)</b>		-	
<b>Number of Participants</b>	Students	91	Faculty	2	External participants	93
<b>Program Outcome (PO) Mapping</b>	PO1, PO2, PO3, PO4, PO5, PO9, PO10, PO11, PO12					
<b>Coordinators</b>	Mrs. Sowmya Bhandary					
<b>Expenditure</b>			<b>Social Media Link</b>			

**About the Program:**

The **Departments of Computer Science & Engineering (CSE)** and **Information Science & Engineering (ISE)** organized a session titled “**Prompt Engineering, AI workflows, AI applications and the way forward**” on **9<sup>th</sup> August 2025**, from **9:00 AM to 4:00 PM**. The resource person was **Mr. Jayaraj Pergade**, a Director at **Mayonix Innovations Pvt Ltd**. The session was intended for final-year students.

The program was inaugurated by **Dr. Antony P J**, Vice-Principal and Head of the CSE Department. Also present were the placement coordinators **Mr. Nithin Heraje** (CSE) and **Mr. Rakesh** (ISE), along with department heads and all CSE faculty members

**Dr. Antony P J** welcomed the gathering and introduced Mr. Jayaraj Pergade. The Master of Ceremonies was **Ms. Dhanya**, a fourth-year CSE student, who also delivered the vote of thanks.

Mr. Jayaraj Pergade, Director of Mayonix Innovations in Kulai, conducted the session. He has extensive experience in mobile application development and in creating AI-powered applications.

Mr. Pergade delivered an engaging session on:

- **Usage of OpenCV for developing Computer Vision models:** OpenCV is an open-source framework that accelerates the learning and development of computer vision applications. It has been widely adopted in real-world projects for several years. Hands-on training was conducted using Jupyter notebooks with the OpenCV Python framework.
- **Augmentation and labelling:** A practical demonstration was given on how to create a dataset for model training. Students learned how to independently prepare datasets to fine-tune a model. OpenCV was used to capture real-time frames from a webcam, apply image augmentations, and label the images for training.
- **Model training and evaluation:** Using a publicly available hand signal dataset, a YOLO object detection model was fine-tuned and evaluated. The trained model was then loaded, enabling real-time hand signal detection via the webcam.
- **Preparing the model for mobile applications:** The trained model was exported into mobile-friendly formats—CoreML and TFLite. The CoreML version was integrated and tested within an iOS application.
- **Supervised and Unsupervised learning:** The concepts of supervised and unsupervised learning were explained with relevant examples. KMeans and DBSCAN algorithms were demonstrated for unsupervised learning, along with their use cases. Additionally, the process of loading an LLM model in GGUF format using the llama library was demonstrated.
- **Prompt Engineering & Use Cases:** Prompt engineering was introduced, drawing parallels to user story writing. A script for creating scenes using Google Flow was shared for students to experiment with. The discussion highlighted that crafting a good prompt is a blend of both art and science.

**Objectives:** The program “Prompt Engineering, AI workflows, AI applications and the way forward” enable students to

- Understand the End-to-End Process of Building AI Models  
Learn how to create, label, and augment datasets effectively for computer vision tasks.
- Apply Supervised Learning with YOLO  
Gain hands-on experience in training a YOLO model for object detection and understand its practical use cases.
- Explore Unsupervised Learning Techniques  
Learn the fundamentals and real-world applications of clustering using KMeans and DBSCAN.
- Deploy Models on Mobile Platforms  
Understand how to convert trained models into lightweight, mobile-compatible formats for on-device inference.

- See Deep Learning in Action with Photo Curation  
Analyse a real application that uses deep learning for organizing and curating photo libraries intelligently.
- Experiment with Prompt Engineering  
Discover how to design effective prompts for large language models (LLMs) to solve practical problems.

**Outcomes:** On successful completion of this workshop the student should be able to:

1. Explain the complete lifecycle of AI model development
2. Build and manage computer vision datasets
3. Apply unsupervised learning algorithms
4. Deploy AI models on mobile platforms
5. Design effective prompts for large language models (LLMs)

**Articulation Matrix:**

Course Outcomes	Program Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12
1	3	2	2	2	3	-	-	-	1	2	2	3
2	2	2	3	2	3	-	-	-	1	1	1	3
3	3	-	-	3	3	-	-	-	1	1	0	3
4	1	1	3	-	2	-	-	-	1	1	3	3
5	2	-	2	1	3	-	-	-	1	3	2	3
<b>Average</b>	2.2	1	2	1.6	2.8	-	-	-	1	1.6	1.6	3

**Photos:** (with description)



# Mangaluru, Karnataka, India

9th Cross St, Kodikal Rd, Bangrakuloor, Kodikal,

Mangaluru, Karnataka 575006, India

Lat 12.91305° Long 74.831162°

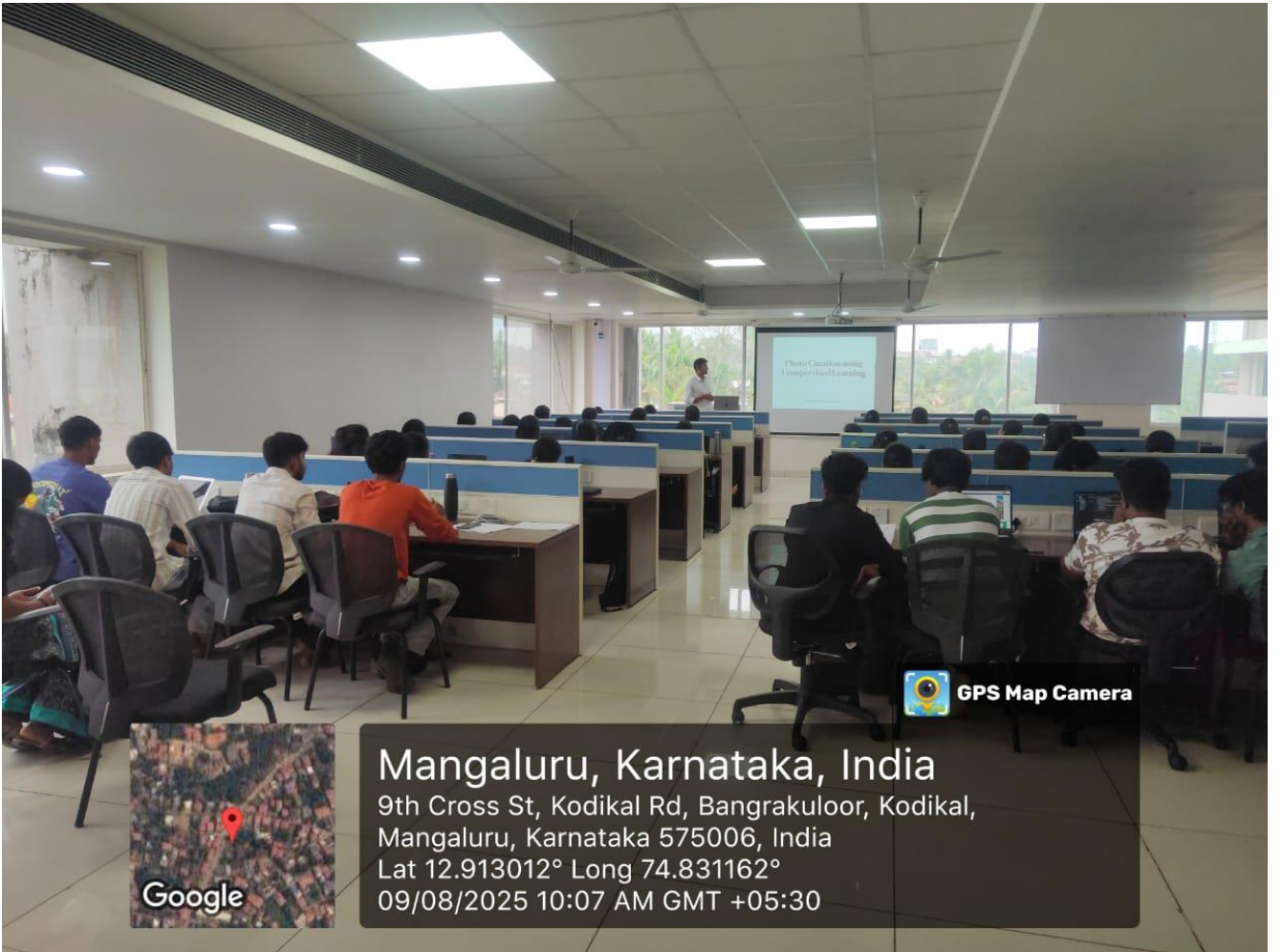
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