



GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous)
Cheeryal (V), Keesara (M), Medchal Dist., 501 301

Department of CSE(AI&ML)

Six days Faculty Development Programme (FDP) on “**Advancements in AI: From Machine Learning to Generative Models**” 23rd to 28th June, 2025.

Chief Patron

Sri. G. R. Ravinder Reddy, Chairman

Sri. R. Harish Chandra Reddy, Vice Chairman

Patrons

Dr. S. Udaya Kumar, Director

Dr. K. Sagar, Principal

Conveners

Dr. G. Bindu Madhavi, Associate Professor & HOD-CSE (AIML)

Dr. V. Madhusudan Rao, Professor & Dean, School of Computer Science and

Informatics

Coordinators

Dr. P V Shalini, Associate Professor, CSE (AIML)

Dr. B. Adithya, Associate Professor, CSE (AIML)

Report

The six days Faculty Development Programme (FDP) on “**Advancements in AI: From Machine Learning to Generative Models**” was held from 23rd to 28th June, 2025. This comprehensive program aimed at enhancing the knowledge and skills of faculty members in the rapidly advancing fields of AI, ML models, Large Language Models and Generative AI models. The FDP provided an in-depth exploration of the latest advancements in these technologies and their application across various domains. Experts from industry led the sessions, offering participants valuable insights into current trends, challenges, and opportunities within these cutting-edge fields.

Throughout the week, the participants engaged in a series of lectures, hands-on workshops, and interactive discussions. Key topics covered included AI-based decision making systems, the fundamentals of machine learning models, Generative AI models and the practical applications of Generative AI like ChatGPT. Additionally, faculty members were introduced to building their own ChatGPT and user interface for it, providing them with the necessary resources to incorporate these technologies into their curriculum and research projects.

The program concluded with a Generative AI RAG and Hugging face session, encouraging collaboration among participants from various educational institutions. Feedback from the attendees indicated a high level of satisfaction with the knowledge gained and the relevance of the topics discussed. Many participants expressed their intent to integrate AI, ML, and Generative AI into their teaching and research, recognizing the need for academic institutions to adapt to the evolving technological landscape. The FDP was a successful initiative that empowered faculty members to remain at the forefront of AI and machine learning advancements, thereby ensuring that they are well-equipped to guide students through the complexities of these transformative fields.

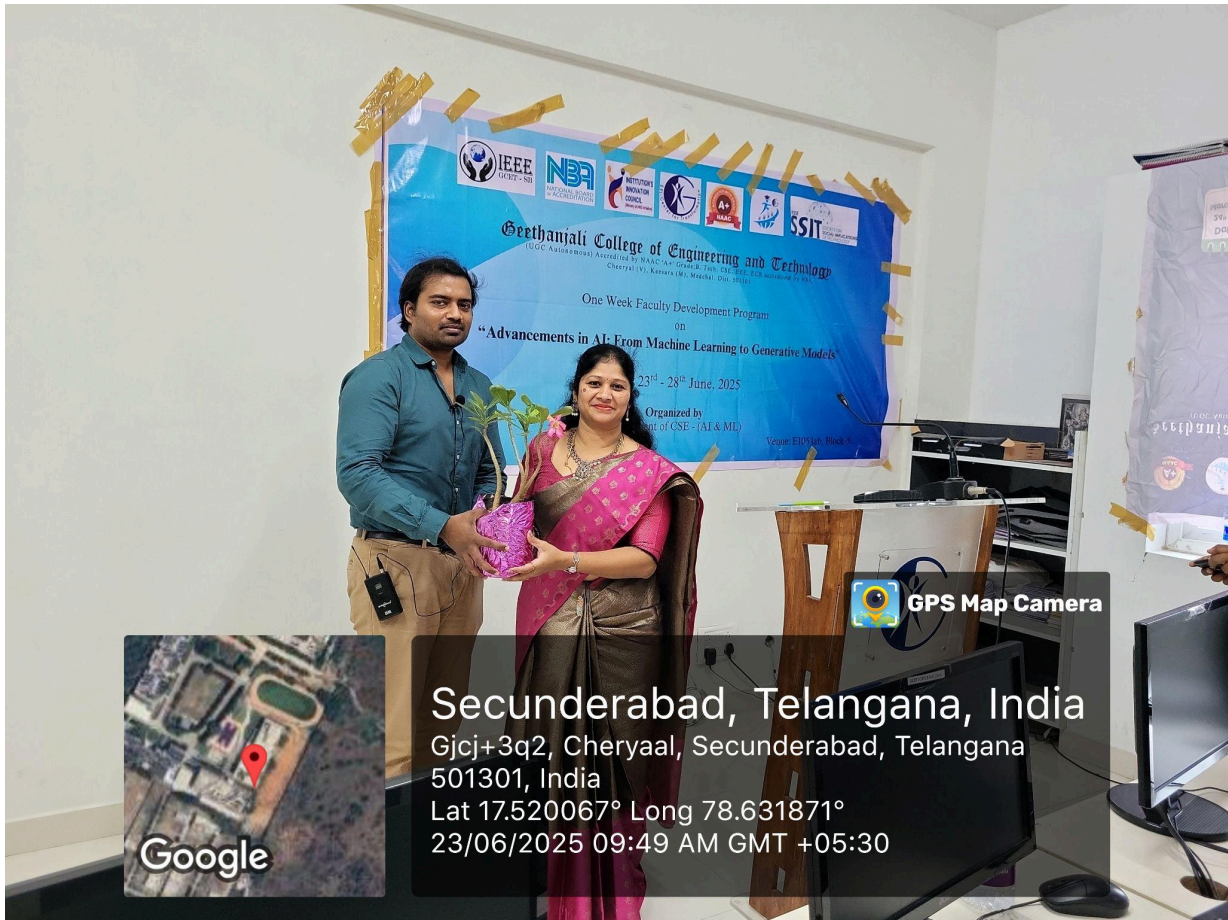
Glimpse of the FDP:

The Five Days Faculty Development Programme (FDP) on “**Advancements in AI: From Machine Learning to Generative Models**” from 23rd to 28th June, 2025 equipped faculty members with the latest insights, tools, and applications of these technologies to enhance their teaching and research. A total of over 28 participants, from our institution from AIML and other departments gained knowledge of these cutting-edge technologies.

DAY 1 (23-06-2025) Room No: 105 & 106 Lab, Block-5

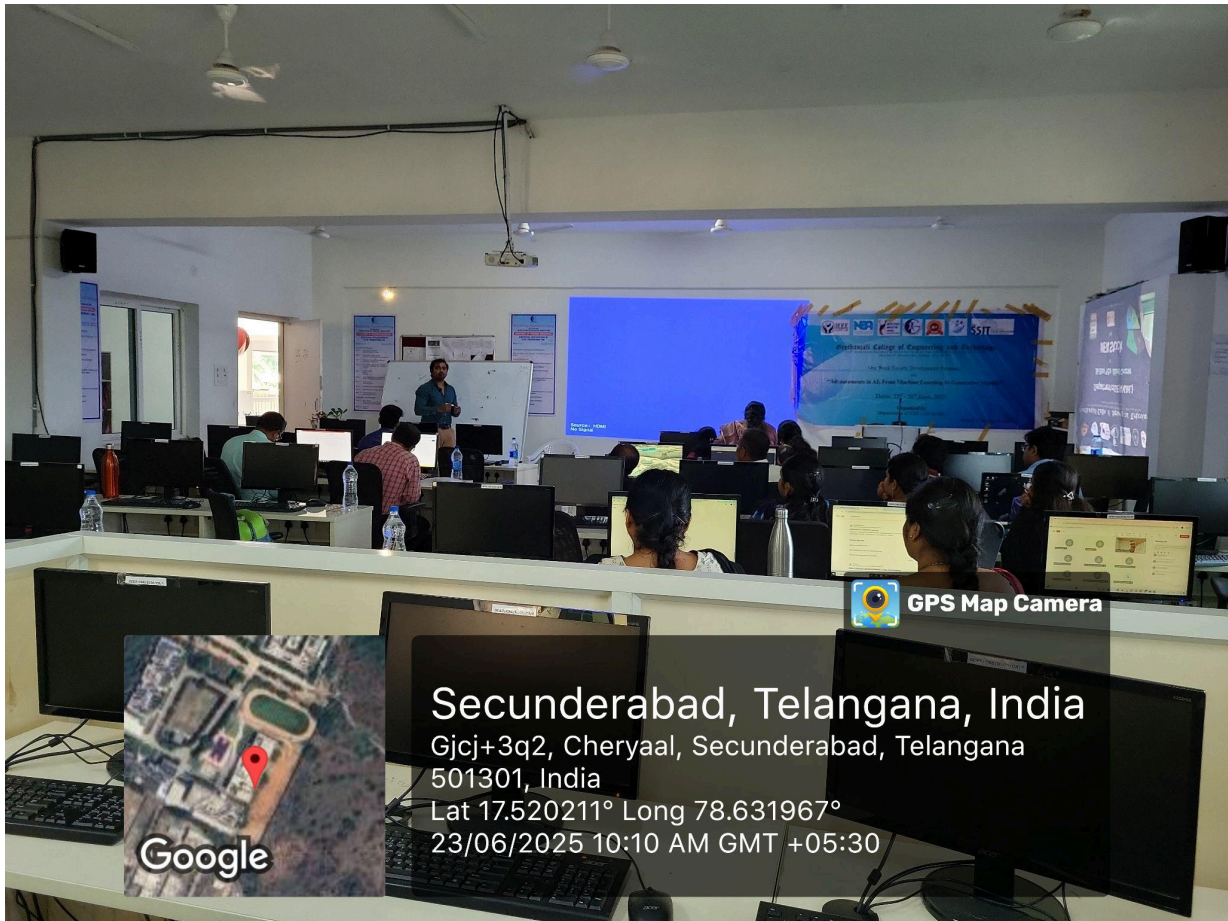
Resource Person: **Kiran Kumar Kandula**, Data Science Engineer, Micron, Hyderabad.

Welcome resource person with sapling



Topics Covered:

- Fundamentals of Machine Learning
Supervised vs. Unsupervised Learning
Regression, Classification, and Clustering Overview
- Data preprocessing
- Model training & evaluation using Python (Scikit-learn)
- Build a classification model on a sample dataset (Iris/Titanic)



DAY 2 (24-06-2025) Room No: 105 & 106 Lab, Block-5

Resource Person: **Kiran Kumar Kandula**, Data Science Engineer, Micron, Hyderabad.

Topics Covered:

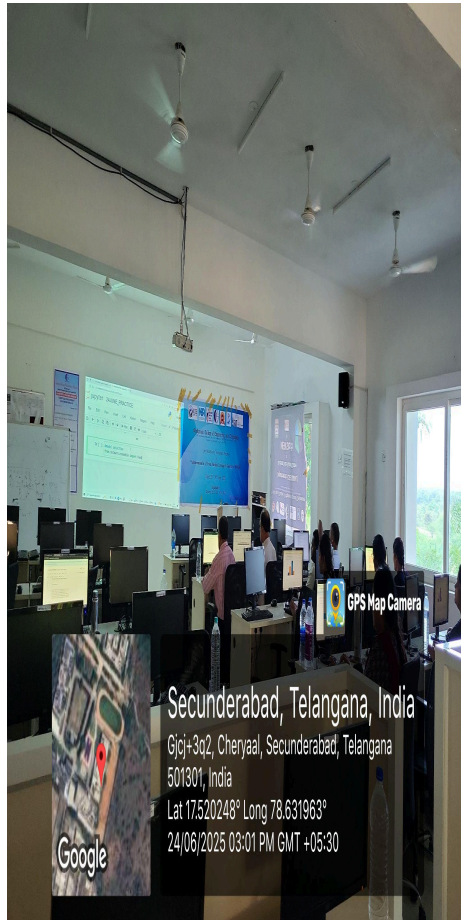
Deep Learning Basics

- Perceptron, Activation functions, Backpropagation
- Overview of Neural Networks & Architectures

Building Deep Learning Models with TensorFlow/Keras

- Dense, CNN, RNN overview

Image classification using CNN on MNIST/CIFAR-10



DAY 3 (25-06-2025) Room No: 105 & 106 Lab, Block-5

Resource Person: **Kiran Kumar Kandula**, Data Science Engineer, Micron, Hyderabad.

Topics Covered:

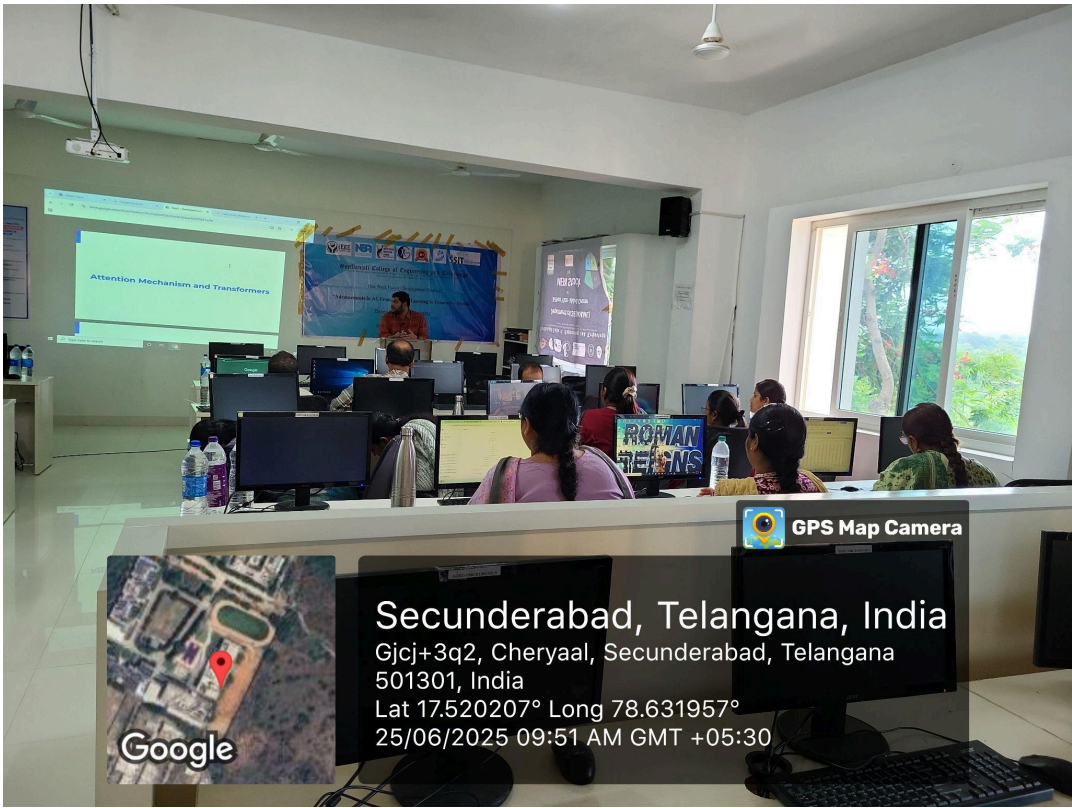
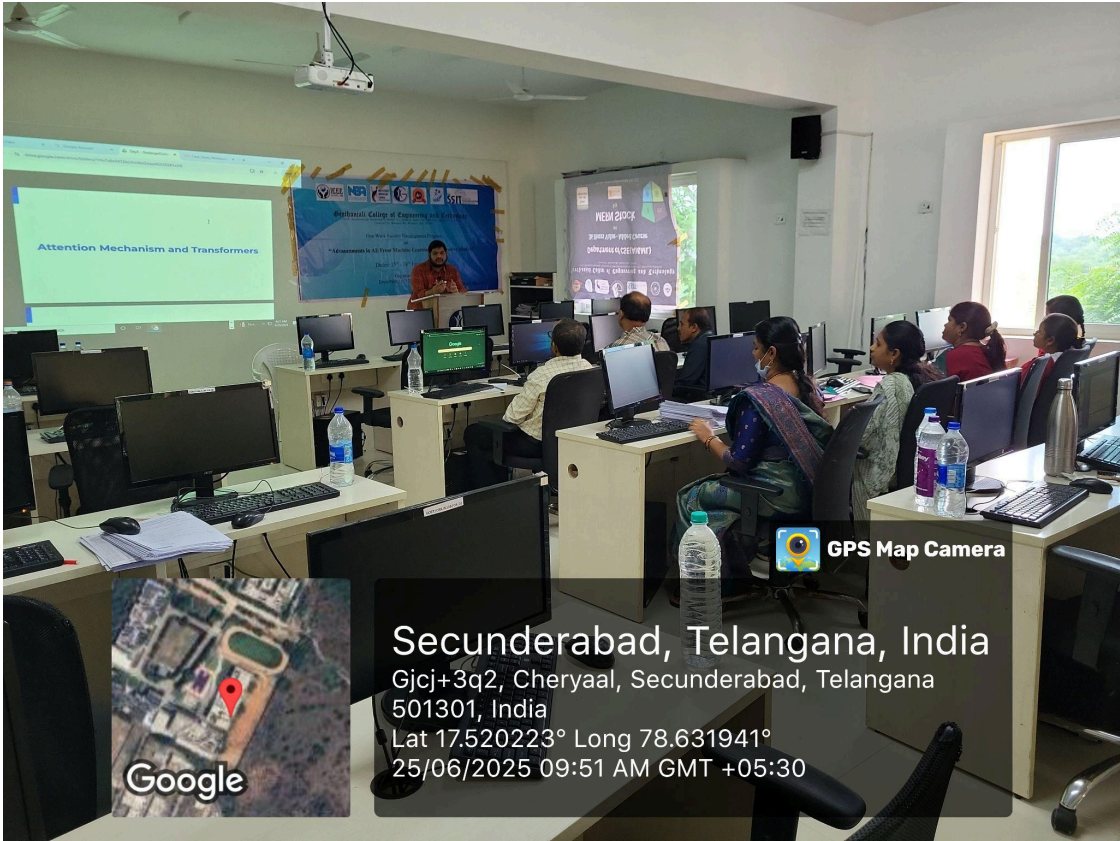
Understanding Transformer Architecture

- Self-attention, Encoder-decoder mechanism
- Introduction to BERT, GPT, and other models

Training and Optimization: Pre-training and Fine Tuning, Self and multi-headed attention

Hugging Face Library

- Model loading, fine-tuning, inference



DAY 4 (26-06-2025) Room No: 105 & 106 Lab, Block-5

Resource Person: **Kiran Kumar Kandula**, Data Science Engineer, Micron, Hyderabad.

Topics Covered:

Introduction to Generative AI

- GANs, Diffusion models, LLMs overview

Google Gemini Overview

- Gemini capabilities, architecture, APIs
- Comparison with GPT and other LLMs

Content generation using Gemini API or Gemini Studio (or Gemini-based tools)





DAY 5 (27-06-2025) Room No: 105 & 106 Lab, Block-5

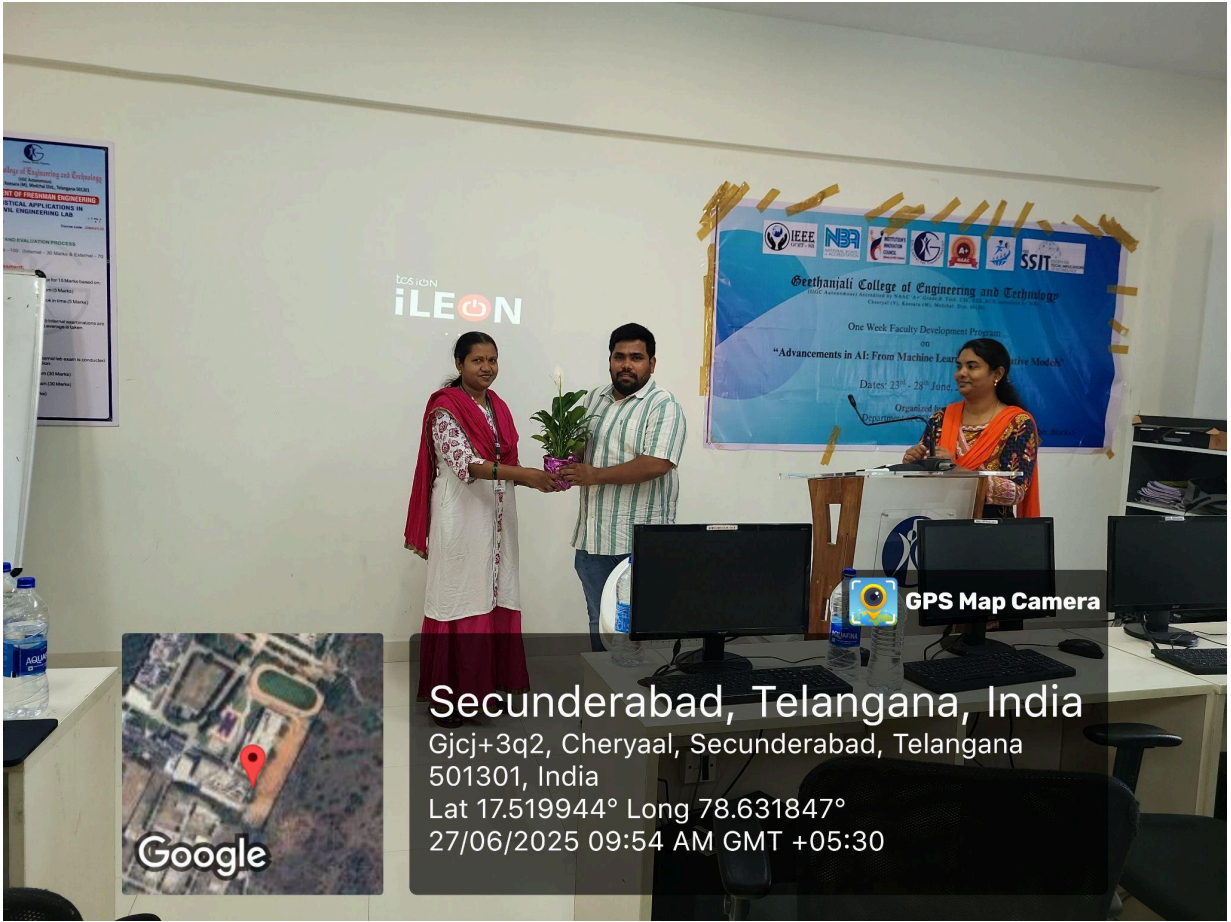
Resource Person: **Dr. Sreenivasulu Madichetty**, Manager Data Science,

Publicis Sapient, Hyderabad.

Topics Covered:

- Introduction to NLP
 - Text preprocessing: tokenization, stemming, stopwords
 - Feature extraction: BoW, TF-IDF
- NLP with spaCy & NLTK
 - Named Entity Recognition, POS tagging,
- Text classification or question answering with BERT using Hugging Face
- Use Case: Sentiment analysis on movie and product reviews

Resource person welcomed by coordinator Dr.P.V. Shalini, Associate Professor CSE(AI&ML)

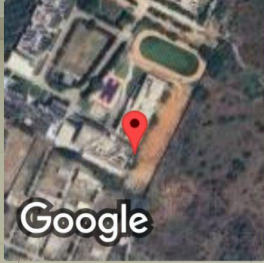


Geethanjali College of Engineering and Technology
100, Cheryaal, Secunderabad, Telangana-501301
Department of Electrical Engineering
Electrical Applications in
AI Engineering LAB

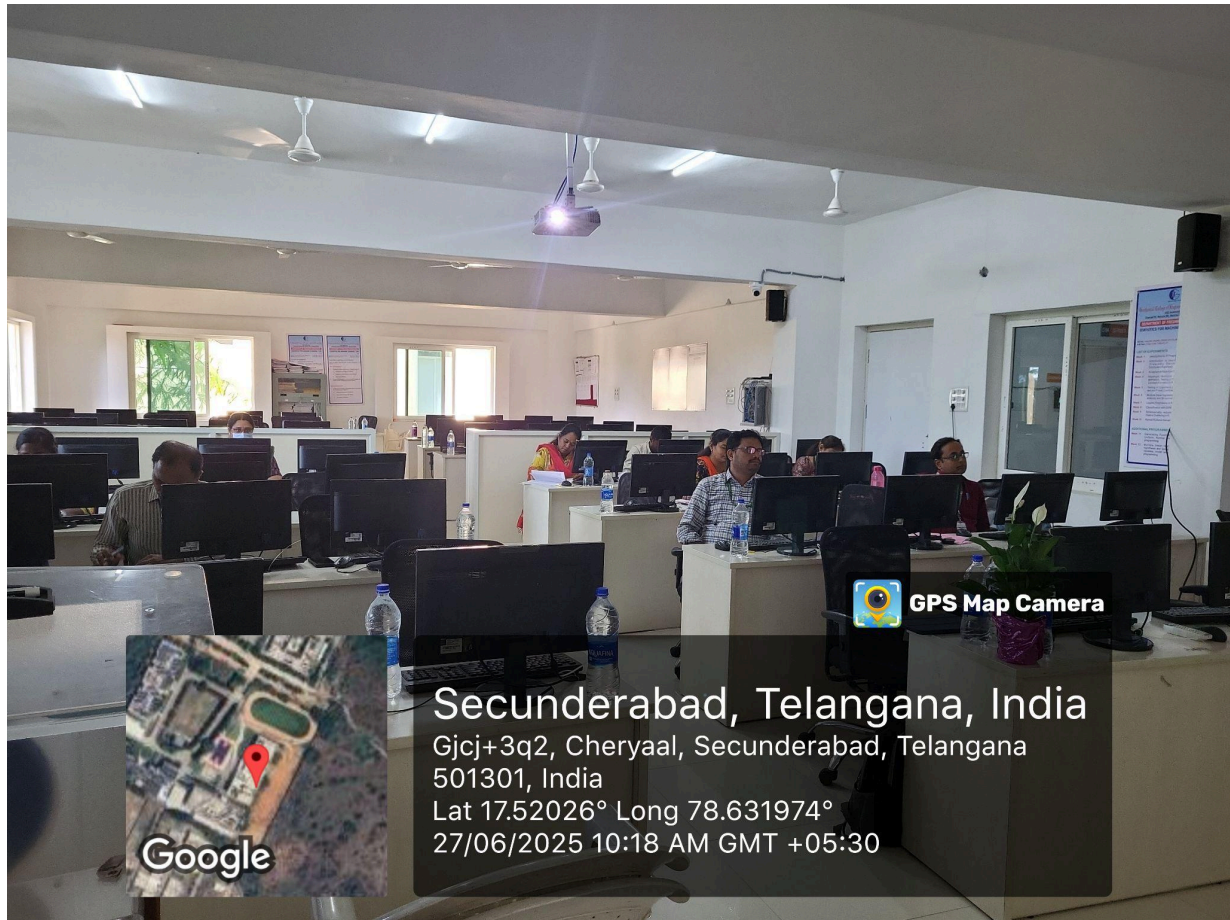
LOCATION
ILEON

IEEE NBR AI SSIT
Geethanjali College of Engineering and Technology
One Week Faculty Development Program
on
"Advancements in AI: From Machine Learning to Generative Models"
Dates: 23rd - 28th June 2025
Organized by
Department of Electrical Engineering

GPS Map Camera



Secunderabad, Telangana, India
Gjcj+3q2, Cheryaal, Secunderabad, Telangana
501301, India
Lat 17.519944° Long 78.631847°
27/06/2025 09:54 AM GMT +05:30



DAY 6 (28-06-2025) Room No: 105 & 106 Lab, Block-5

Resource Person: **Dr. Sreenivasulu Madichetty**, Manager Data Science,
Publicis Sapient, Hyderabad.

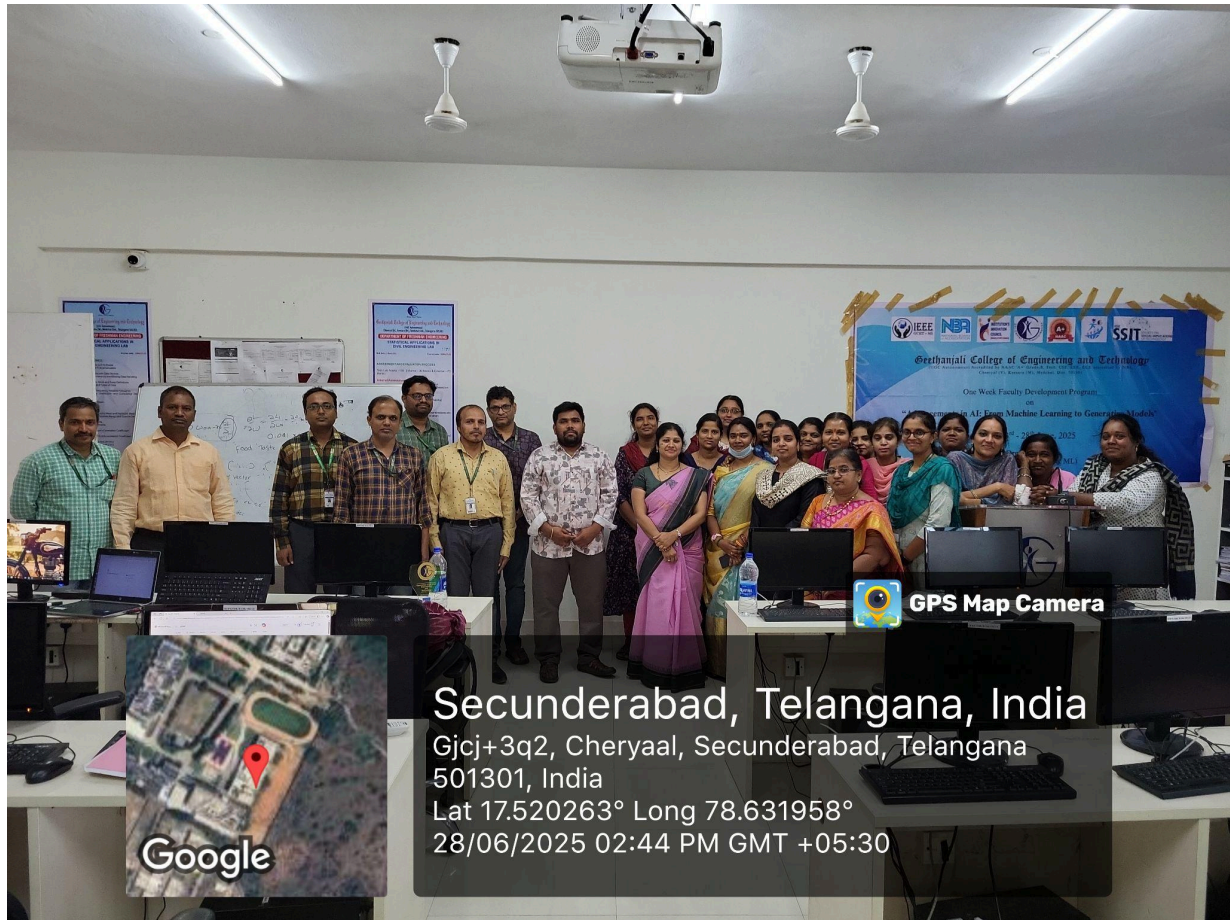
Topics Covered:

- Introduction to RAG and its importance
 - Comparison: Traditional LLMs vs. RAG
 - Core RAG Architecture: Retriever + Generator
- Understanding the Retriever: Embeddings & Vector Search.
- Understanding the Generator: Context-aware Text Generation.
 - RAG in Practice: Building a AI system or Chatbot.
 - Real world Use Cases: Legal, Healthcare, Enterprise Search
- Capstone Project Hands-on
- Participants choose: ML model, DL model, NLP task, or GenAI use-case - Mentor-led development

Valedictory by HoD Dr. G. Bindu Madhavi and Dr. L Venkateshwarlu



Group Photograph of all participants, committee members, coordinators, HoD with Resource person.



This FDP took place over five enriching days, filled with engaging sessions, workshops, and interactive discussions. From the very first day, participants were immersed in a learning environment that encouraged growth and knowledge-sharing. Expert speakers and facilitators led insightful sessions, addressing various aspects of professional development, skill building, and cutting-edge trends in academia and industry.

Over the course of the program, participants not only gained valuable insights but also had the opportunity to network with peers and experts in their respective fields. Each day was marked by thought-provoking sessions, group activities, and practical applications that made the learning experience both theoretical and hands-on.

As the program came to a close, a final session was conducted to reflect on the key takeaways and learnings from the entire week. The event concluded with a vote of thanks, where heartfelt gratitude was expressed to the distinguished speakers, facilitators, and all the participants for their active engagement and contribution. Special appreciation was given to the organizing team, who worked tirelessly behind the scenes to ensure the smooth execution of the event.

The vote of thanks acknowledged the collaborative spirit that made the FDP

successful and highlighted how the experience had enriched everyone's professional journey. Participants left the program feeling inspired, empowered, and equipped with valuable tools to apply in their respective fields. All participants received their certificates of participation at the end of the event.

ORGANIZING COMMITTEE:

- 1) Dr. K. Arpitha, Assoc. Professor.
- 2) Mr. SK Akbar, Assoc. Professor.
- 3) Ms. Preeti Prasada, Sr. Asst. Professor.
- 4) Ms. T. Kranthika, Asst. Professor.