Generative AI: Math Foundations to Multimodal Modeling

Training Program

Who Should Attend?

This course is designed for intermediate students and professionals interested in the rapidly evolving field of AI, who seek a comprehensive understanding of generative AI. Participants should have fluency in Python programming, basic knowledge of machine learning concepts, and a fundamental understanding of probability and statistics.

Course Structure

The course is structured as weekend classes (Saturdays), totaling 80 hours of instruction, with 10 contact classes. Classes will be held at AU-KBC Research Centre for Emerging Technologies, MIT campus of Anna University, Chrompet, Chennai.

Course Fees

The course fee is Rs. 1,00,000/- inclusive of taxes. This fee covers lectures, hands-on training, course materials, and complimentary lunch.

Course Summary

Provides a comprehensive introduction to generative AI, covering fundamental concepts, diverse generative models, and hands-on experience in developing and applying these models to real-world problems.

Topics Covered:

- Mathematical Foundations for Machine Learning
- Machine Learning Fundamentals
- Deep Learning Basics
- Introduction to Generative AI
- Multi-modal Modeling
- Other Generative Models and Advanced Topics

Hands-on Training:

- Implement and train generative models using popular frameworks (e.g., TensorFlow, PyTorch)
- Apply generative AI techniques to solve problems in different domains (e.g., image generation, text generation, music composition)
- Evaluate the performance of generative models and understand their limitations

Upon successful completion of this course, students will be able to:

- Understand the fundamental concepts and principles of generative AI.
- Grasp core machine learning concepts relevant to generative modeling.
- Explain the differences between various generative models (GANs, VAEs, diffusion models, etc.).
- Implement and train generative models using popular frameworks (e.g., TensorFlow, PyTorch).
- Apply generative AI techniques to solve problems in different domains (e.g., image generation, text generation, speech/music generation).
- Evaluate the performance of generative models and understand their limitations.

- Discuss the ethical implications and societal impact of generative AI.

Certificate

Trainees will receive a certificate from Anna University upon completion of the course. There will be evaluation at the end of the course.

Registration Details:

Please register by filling the form, whose link is given below:

https://forms.gle/JMXW4rEKFHbuQfng6

For any queries you may contact us at:

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Tentative Starting Date: March 1st, 2025

https://au-kbc.org/genai-trainingprogram.html