



सत्यमेव जयते

राष्ट्रीय इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी संस्थान, कालीकट  
National Institute of Electronics & Information Technology, Calicut

Ministry of Electronics and  
Information Technology  
Government of India

# Online Course Prospectus

ISO 9001-2015 Certified

## Generative AI Fundamentals

29<sup>th</sup> Aug – 2<sup>nd</sup> Sep 2024  
(2 hours daily)

### Course Description

The objective of this course is to explore the transformative power of generative AI. The candidate will learn popular generative models and how they work, how generative models are developed using tools like GPT and Hugging Face, text generation, image, audio, and video generation. Gain hands-on experience with cutting-edge tools and techniques, including GANs and recurrent neural networks, to create innovative AI applications.

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# Generative AI Fundamentals

## Who can attend?

Anyone who is interested to learn Generative AI. It is designed for

- Students / Working Professionals.

## Course Content

| Session | Topic   |
|---------|---|
| 1       | Introduction to Data, Introduction to AI, AI Applications, Machine Learning-Classification, Regression, Clustering, Artificial Neural Networks, Deep Learning   |
| 2       | Introduction to Generative AI, History and Evolution of Generative AI, Capabilities of Generative AI, How Generative AI works/ Techniques in Gen AI, Generative AI applications, Tools for Text Generation, Tools for Image Generation, Tools for Audio and Video Generation, Tools for Code Generation |
| 3       | Sequence Generation Models: Recurrent Neural Networks (RNNs), Long Short-Term Memory (LSTM) networks  |
| 4       | Introduction to Generative Adversarial Networks (GANs), Understanding of GANs architecture and training process. Generating Images with GANs. Implement a basic GAN in Python using TensorFlow.   |
| 5       | Generative AI in Text and Language: Introduction to Text Generation, Basics of Transformers, Building Text Generators   |

## Fee and important dates

|  |                              |
|--|------------------------------|
| Course Fee                               | Rs. 1500/- (Including GST)   |
| Last date for registration and payment   | 25 <sup>th</sup> August 2024 |
| Sharing of course page link and password | 29 <sup>th</sup> August 2024 |

## Prerequisite

Basic Knowledge of Python and Machine Learning.

## Certificate

Participation Certificate will be issued to all candidates who attend the course.

## Minimum Requirements

Attendees must have a computer system with good internet connection.

## Faculty

**Dr. Vimala Mathew,**

Scientist E

## For more details

For more details contact [vimala@calicut.nielit.in](mailto:vimala@calicut.nielit.in)

9446017466 (from 9.00AM to 5.30PM)

## Terms and Conditions

- 1. In case any registered candidate could not attend the online session due to technical issue at their side there will not be any refund of the course fee and the sessions will not be repeated.*
- 2. In case the online course is cancelled /postponed due to some technical issue at NIELIT side and new date is not convenient to the candidate, our liability is limited to the refund of the course fee and NIELIT shall not be responsible for any consequential damages.*
3. 60% attendance and feedback submission are mandatory for awarding ‘participation’ certificate.

For more details about our institution and facilities visit us

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Ministry of Electronics & Information Technology,  
Govt. of India



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