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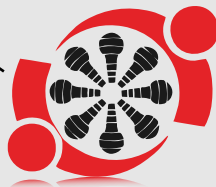


# GENERATIVE AI CURRICULUM

**Online / Offline**

## **Kukatpally**

#205, 2nd Floor, Fortune Signature,  
Near JNTU Metro Station, Kukatpally,  
Hyderabad, Telangana 500085.



## **Gachibowli**

2nd Floor, Leeway, BP Raju Marg,  
Opp. Sarath City Capital Mall,  
Laxmi Cyber City, Whitefields, Kondapur,  
Telangana 500081.

 [www.innomatics.in](http://www.innomatics.in)  +91 9951666670

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## OUR AWARDS & COLLABORATIONS



AUTHORIZED  
IBM PARTNER



IN PARTNERSHIP  
WITH  
NASSCOM  
FOUNDATION  
futureskills  
prime



MOST TRUSTED  
INDIAN COMPANY  
AWARDED BY

WORLD  
BRAND  
AFFAIRS



BEST DATA  
SCIENCE EDTECH  
IN INDIA  
AWARDED BY

THE TIMES  
GROUP



LEADING  
EDTECH  
COMPANY IN 2023  
AWARDED BY

MSME  
Ministry of MSME, Govt. of India



BEST  
DATA SCIENCE  
INSTITUTION  
AWARDED BY

91.1 FM  
Radio City



**350+**  
Batches



**10,000+**  
Career Transformations



**500+**  
Industry Experts


















**Online & Offline**  
Live Classes



**500+**  
Hiring Partners

## TOOLS COVERED IN THE COURSE

 <b>Chroma</b>	 <b>Adobe Firefly</b>	 <b>OpenAI</b>	 <b>LangChain</b>	 <b>Hugging Face</b>
 <b>DALL-E 2</b>	 <b>Diffusers</b>	 <b>PyTorch</b>	 <b>LlamaIndex</b>	 <b>Midjourney</b>
 <b>PEFT</b>	 <b>DreamStudio</b>	 <b>huggingface_hub</b>	 <b>Llama 3</b>	 <b>Gemini</b>

## COURSE OBJECTIVE

- ▶ Understand the importance of Large Language Models for building Generative AI tools.
- ▶ Learn the cutting edge GenAI tools to develop intelligent apps.
- ▶ Develop and deploy apps powered by GenAI in Python.
- ▶ Process unstructured data and perform text analysis.
- ▶ Learn to use Models from HuggingFace.
- ▶ Apply skills to real-world GenAI projects.
- ▶ Foster critical thinking and problem-solving abilities.

## KEY HIGHLIGHTS OF THE TRAINING



### Duration

6 Weeks



### Instructor-Led LIVE Sessions

Both Online & Offline



### Life-time LMS Access

All the course related content



### LIVE Doubt Resolution

One-On-One Mentoring session



### Topic-wise Assignments

All the Modules



### Weekly Quizzes

Evaluate comprehension and application of key concepts, providing timely feedback to enhance learning outcomes.



### Monthly Assessments

Mastery of key concepts and practical skills, ensuring readiness for real-world challenges



### 30+ Use Cases

Providing real-world context for learning



### Vibrant Hackathons

Challenging students to solve real-world problems through data-driven solutions



### Mock Interviews

Helping students refine their communication and technical skills for professional success



### Guaranteed Internship

Extensive in-house 2 to 3 months internship. Gain valuable hands-on experience in real-world settings.



### Dedicated Soft Skills

Equipping you with essential communication, teamwork, and leadership abilities for success



### Resume Tailoring

Techniques to highlight your skills and experience, increasing your chances of securing job opportunities



### 100% Job Assistance

Supported by our extensive network of hiring partners and personalized career guidance

## PREREQUISITES



Python Programming



Machine Learning



Deep Learning



Natural Language Processing

## Section-1 Introduction To Artificial Intelligence

1. Introduction to AI
2. AI vs ML vs DL
3. Types of learning (Supervised, Unsupervised & Reinforcement)
4. Core Difference between ML and DL
5. Life Cycle of ML and DL Project

## Section-2 Introduction To Generative AI

Generative AI, the technology that lets computers tap into their creative side. It's like teaching a computer to paint, compose music, or write stories, all by learning from what's already out there. In this course, you'll explore the inner workings of neural networks, GANs (Generative Adversarial Networks), and other advanced techniques. Whether you're an aspiring artist looking to push boundaries, a musician wanting to compose groundbreaking tunes, or a developer with a passion for innovation, this course will equip you with the skills to bring your ideas to life. Join us and embark on this thrilling journey into the future of AI!

1. Introduction to Generative AI
2. Overview of generative AI technologies.
3. Applications and case studies across industries.

## Section-3 Getting Started With Large Language Models

1. Into to large language Models
2. History of NLP
3. Intro to RNN,LSTM,GRU
4. Intro to Encoder Decoder Model
5. Intro and Deep Dive in to Attention ,Transformers
6. Working Of Different Transformers Model
7. What is Large Language Model
8. Types of Large Language Model

## Section-4 Prompt Engineering And Working With LLM

1. Intro to Prompt Engineering
2. LLM with Prompt Engineering
3. Introduction to GPT models.
4. Understanding how GPT-3 and GPT-4 work
5. Training on popular LLMs like GPT (Generative Pre-trained Transformer).
6. Practical applications of LLMs in generating text, code, and more

**Case Study:** Creating a project with LLMS

## Section-5 Working with Open AI API

1. Intro To Open Ai
2. Utilizing OpenAI APIs
3. Setting up and authenticating API usage.
4. Practical exercises using GPT-3/GPT-4 for text generation.
5. Understanding DALL-E and its capabilities in image generation.



Hands-on project to generate images from textual descriptions.

## Section-6

## Working with Google Gemini Gen API

1. Getting Started with Gemini
2. How to obtain an API key for Gemini.
3. Overview of the Gemini API and accessing its features.
4. Detailed exploration of different Gemini models.
5. Selecting and initializing the right model for specific tasks.
6. Step-by-step project to create an AI-powered chatbot using Gemini.

## Section-7

## Working with Meta's LLaMA API

1. Introduction of LLaMA .
2. Comparison with other large language models like GPT-3 and GPT-4.
3. Key features and capabilities of LLaMA
4. Understanding the Model Architecture of LLaMA.
5. Discussion on model sizes and capabilities.
6. Environment setup: Installing necessary libraries and tools
7. Accessing LLaMA models: Overview of the download process and setup on local machines or cloud platforms (Meta LLaMa).
8. Intro to the architecture of LLaMA models
9. Understanding the differences between LLaMA model variants (8B, 13B, 30B, and 70B parameters)
10. Implementing text generation using LLaMA

## Section-8

### Working With Hugging Face Ecosystem

1. Introduction to the Hugging Face ecosystem and the Transformers library.
2. Exploring Hugging Face Models and Tokenizers.
3. Project: Using a pre-trained model to perform sentiment analysis
4. Introduction to the Trainer API.
5. Saving and sharing models through Hugging Face Model Hub.
6. Multi-lingual models and cross-lingual transfer learning.
7. Using pipelines for different tasks (text generation, named entity recognition, summarization).
8. Integrating Hugging Face models with web application

## Section-9

### Building Gen AI Apps Using LangChain

1. Introduction to the LangChain framework
2. Understanding the purpose and core components of LangChain Framework
3. LangChain Setup and necessary dependencies
4. Basic configuration and setup for development
5. Step-by-step guide to creating a simple application using LangChain Framework
6. Detailed walkthroughs of real-world applications built with LangChain



**Section-10****Intro To RAG**

1. Intro To RAG

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2. Building applications using RAG

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3. LLMs in Depth

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4. Fine Tuning LLMs

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5. Training LLMs by Implementing Fine Tuning

**Section-11****Stable Diffusion by Stability AI**

1. Intro to Stable Diffusion

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2. Fundamentals of Diffusion Models

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3. Application of Stable Diffusion

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4. Modifying image attributes and styles using prompt engineering

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5. Parameters of image generation: seeds, prompts, and steps explained

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6. Tool For Stable Diffusion

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7. Fine-tuning and training Stable Diffusion on custom datasets

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8. Advanced prompt engineering and achieving specific artistic effects.

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9. Introduction to variations and derivatives of Stable Diffusion (e.g., DreamBooth for personalization).

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10. Using the Diffusion library for more control over the diffusion process.

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11. Integrating Stable Diffusion models into web applications

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12. Advance Stable Diffusion Techniques



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WE TRANSFORM CAREERS**

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