



Skillup Bharat

Training | Placements | Outsourcing

GENERATIVE AI



About Company

SkillUp Bharat is a leading platform that offers technical and non-technical courses designed to prepare students for industry challenges.

We provide internships, hands-on training, and placement opportunities, ensuring learners gain practical experience through real-time projects. Our programs focus on enhancing both technical and soft skills, making students job-ready.

WHY TO CHOOSE US!

- 1. Industry-Relevant Courses**
- 2. Hands-On Internships**
- 3. Real-Time Project Experience**
- 4. Placement Support**

Generative Ai Syllabus

Irrespective of any domain

Description

Skillup Bharat offers an in-depth Generative AI training program designed to equip learners with cutting-edge skills in artificial intelligence. The program focuses on the development of generative models, including Variational Autoencoders (VAEs), Generative Adversarial Networks (GANs), and advanced models like transformers and diffusion models. Participants are introduced to foundational concepts in AI, machine learning, and deep learning, ensuring they grasp the essential building blocks before diving into complex generative techniques.

The training emphasizes practical, hands-on learning with real-world applications. Learners engage with projects such as building text generation models using GPT (Generative Pretrained Transformers), image synthesis using GANs, and multimodal AI projects like text-to-image generation. Each module is designed to build incrementally, from data handling and preprocessing to model training, fine-tuning, and deployment. By the end of the program, participants have worked on several industry-relevant projects, gaining expertise in creating AI-powered systems that can automate content creation across sectors like entertainment, art, and marketing.

Skillup Bharat's Generative AI program also addresses ethical considerations and the importance of responsible AI usage. Participants explore strategies to reduce bias in generative models and learn about the broader implications of AI in society.

Expectations and Goals

- **Comprehensive Understanding of AI Fundamentals**
- **Master Generative Models**
- **Hands-On Experience**
- **Advanced AI Techniques**
- **Responsible AI Development**
- **Cloud Deployment Skills**
- **Develop AI Systems for Automated Content Generation**
- **Achieve Proficiency in Key AI Tools**
- **Understand AI Model Deployment**
- **Solve Real-World Problems Using AI**

Complete Generative Ai Study Plan 2024

Course Syllabus:

Module 1: Foundations of AI and Machine Learning

- **Basics of AI, ML, and Deep Learning**
- **Supervised, Unsupervised, and Reinforcement Learning**
- **Introduction to Neural Networks**
- **TensorFlow and PyTorch basics**
- **Evaluation metrics: Accuracy, Precision, Recall, F1 Score**
- **Project: Train a basic image classifier using neural networks**

Module 2: Introduction to Generative Models

- **Overview of Generative vs. Discriminative Models**
- **Variational Autoencoders (VAEs)**
- **Generative Adversarial Networks (GANs)**
- **Generator vs. Discriminator losses**
- **Project: Implement a basic VAE or GAN for image generation**

Module 3: Data Handling, Preprocessing, and Augmentation

- **Data cleaning and preprocessing for large datasets**
- **Data augmentation for image and text models**
- **Techniques for handling large datasets in generative models**
- **Project: Build a data preprocessing pipeline for GAN training**

Module 4: Generative AI for NLP

- **Tokenization and word embeddings**
- **Recurrent Neural Networks (RNNs), LSTMs, and Transformers**
- **GPT (Generative Pretrained Transformer) for text generation**
- **Text generation techniques: Sequence-to-sequence, Beam search**
- **Project: Build a text generation model using GPT**

Module 5: Generative AI for Images

- **Advanced GAN architectures**
- **Conditional GANs for controlled image generation**
- **Style Transfer and Image Synthesis**
- **Project: Create a StyleGAN model to generate images based on style or categories**

Module 6: Advanced Generative Models and Techniques

- Multimodal models like DALL-E and CLIP for text-to-image generation
- Transformer-based image generation
- Introduction to Diffusion Models
- Project: Develop a multimodal AI model for text-to-image generation

Module 7: Generative AI in Real-World Applications

- Applications of Generative AI in industries (e.g., Gaming, Art, Fashion)
- AI in content creation
- AI-powered tools for voice generation
- Project: Implement an AI model for industry-specific applications

Module 8: Ethics, Bias, and Responsible AI

- Addressing bias in generative models
- Ethical implications of AI-generated content
- Guidelines for Responsible AI development
- Project: Conduct bias analysis on a generative model and implement techniques to reduce bias

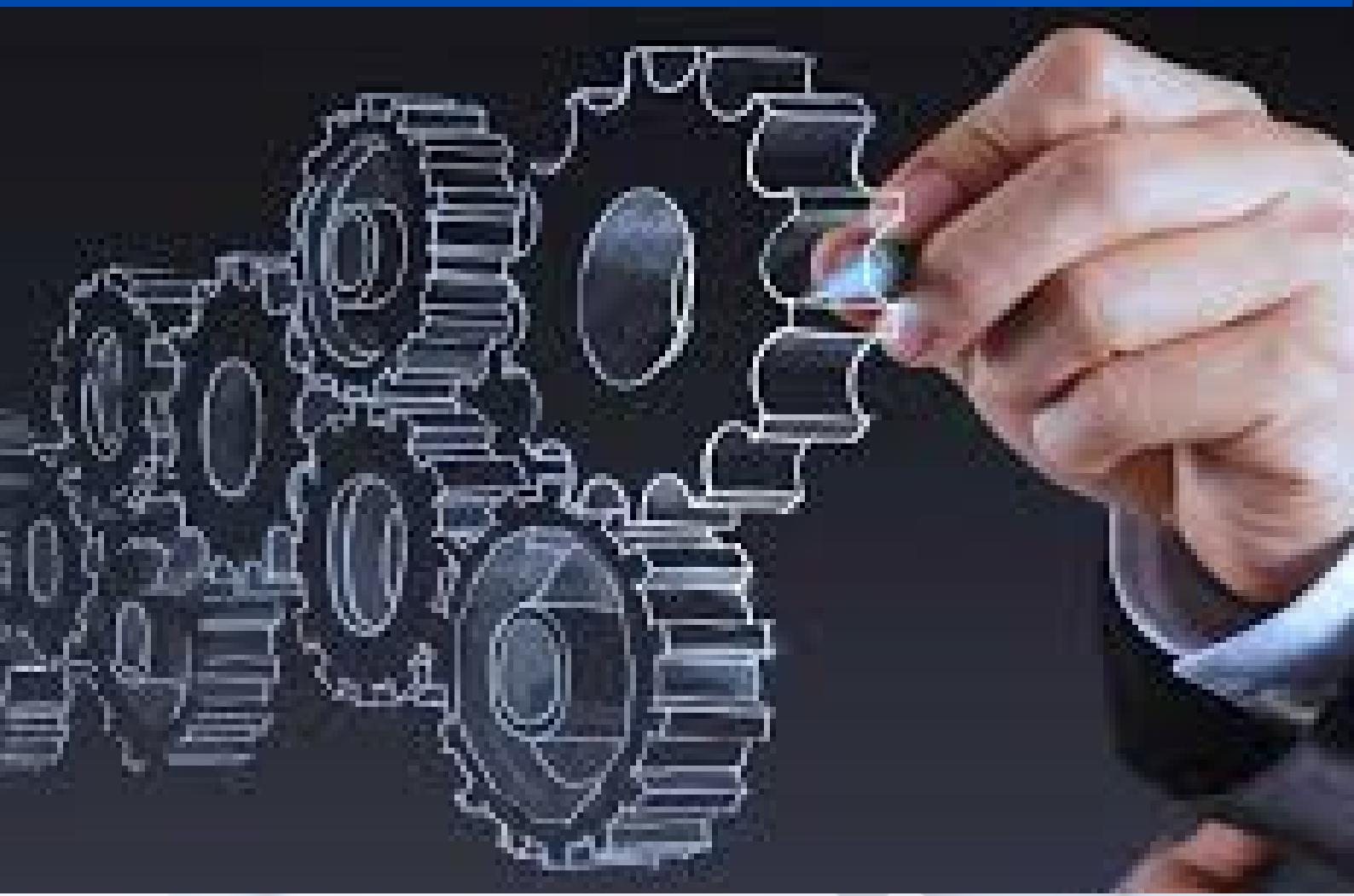
Module 9: Capstone Project & Deployment

- End-to-end deployment of generative models
- Model optimization for production
- Cloud deployment
- Serving models via APIs
- **Capstone Project: Build and deploy a complete generative AI system**

Module 10: Placement Preparation and Interview Guidance

- Technical interview preparation (AI/ML, Deep Learning)-
Resume building and portfolio creation
- Networking strategies (GitHub, LinkedIn)
- **Outcome: Guidance on placements and job interviews**





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THANK YOU

**Master New Skills, Unlock
New Opportunities!**