

Module-1: Overview of Generative AI

- Overview of Genrative AI
- Historical Context and Evolution
- Basic machine learning: supervised, unsupervised, and reinforcement learning
- Introduction to Deep Learning and Neural Networks

Module-2: Foundational Concept of Generative AI

- Supervised learning- Naive Bayes Classifier
- Supervised learning - K Nearest Neighbour Classifier
- Supervised Learning - Decision Tree Classifier
- Supervised learning - Support Vector Machine (SVM Classifier)
- Supervised learning - Logistic Regression Classifier
- Supervised Learning - Linear Regression
- Supervised Learning - Lasso
- Unsupervised learning - K Means Clustering
- Unsupervised Learning - Agglomerative Clustering
- Unsupervised Learning - FP growth method
- Reinforcement Learning

Module-3: Introduction to deep learning and neural networks

- Deep learning- basics of neuron
- Neural Networks
- Types of Neural Networks
- Types of Architecture in Deep Neural Networks

Module-4: Implementation of deep learning

- Practical coding implementation using neural networks
- Creating different types of architecture

Module-5: Introduction to Generative AI

- Introduction to Generative AI
- Self Attention models
- single head self attention model
- multi-head self attention model

Module-6: Transformers

- Transformers
- Positional Encoding

Module-7: Chat GPT 2 and 3

- Intro to Chat GPT 2 and 3

Module-8: Working with data gathering and embedding

- gathering data
- data transformation - embedding and positional encoding
- creating neural networks

Module-9: Encoding and testing custom model

- Encoder Decoder Architecture
- Custom Functions to improve our GPT model
- Model Testing

Module-10: Text Summarizer

- Creating a Text Summarizer

Module-11: Testing Text Summarizer

- Testing text Summarizer

Module-12: Future of AI

- Future of AI