

INTRODUCTION TO GEN AI

WHAT IS GEN AI ?

- In GEN AI, the output will be in an easy interactive way. Usually the outputs of supervised and unsupervised will be in numerical way which will be hard for the client to understand.
- The output should be in such a way that will be easy for the client to understand
- GEN AI is a subset of Deep Learning
- When large amount of data is given to a deep learning model, it takes a huge amount of time to process. It takes more time to learn the data and provide accurate outputs which is a massive problem.
- In GEN AI, large amount of data is required to provide accurate results. It learns very fast from a huge dataset.
- It is also used to identify the outliers in a dataset
- It is also used to create a replica of a Large data model
- It is more efficient than the AI.
- AI provides only numerical output but the output of GEN AI can be text, image, video, audio and so on.
- GEN AI : Art creation, video analysis.
- It uses unsupervised / Reinforcement learning
- AI uses supervised, unsupervised and Reinforcement learning. Only if you know AI, we can learn GEN AI
- It can also work in unlabelled, unstructured data

WORKING OF GEN AI

- Discriminative - easily understand the relationships between the data, Correlation matrix, p ratio, works in AI models, does clustering

Example : classifies the dogs, cats or rats

- Generative - generate new data based on the provided data, predicts the future data

Example : generates a new dog image

Working : Input -> Model -> Output (text, image, audio, video)

Example : ChatGPT is an example of reinforcement learning

NLP vs GEN AI

- In sentimental analysis using NLP, we have to remove the punctuations and emojis. NLP cannot understand any other language than english.
- In GEN AI, there is a package which understands the sentiment of the text. It removes the pressure for the data scientist to cleanse and preprocess the dataset. But the problem is you have to understand which model you have to use for the specific purpose.

WHAT is GEN AI ?

- GEN AI is a part of Artificial Intelligence which does its process to create or generate new data.
- Works based on the cosine similarity

TYPES OF GEN AI MODELS

1. Predictive models : predicts the outcome based on the given inputs
2. Generative image models
 - a) Text - Text : Translations, Summarizer, Chatbots
 - b) Text - Image : prompt of a cat will generate a cat image
 - c) Text - Sora : prompt will generate a video Ex : Sora
 - d) Text - audio : Text will be changed into speech

How does the GEN AI works ?

- 1) Learn the data - the parameters

But in GEN AI, the neccessity to learn the parameters is eliminated

- 2) Models cannot understand the test therefore, the text is converted into vectors of numerical data