

Generative AI

Large language models



- ChatGPT
- Google Gemini
- Meta Llama

What is Generative AI?

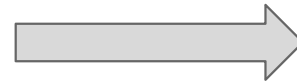
Generative AI generate new data based on training sample. Generative model can generate Image, Text, Audio, Videos etc. data as output.

So generative AI is a very huge topics,

- Generative Image model
- Generative Language model

Generative Model:

Questions

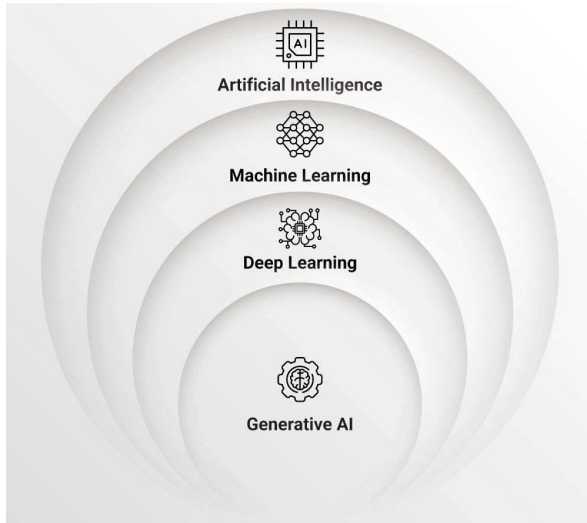


Responses

Why are generative models required?

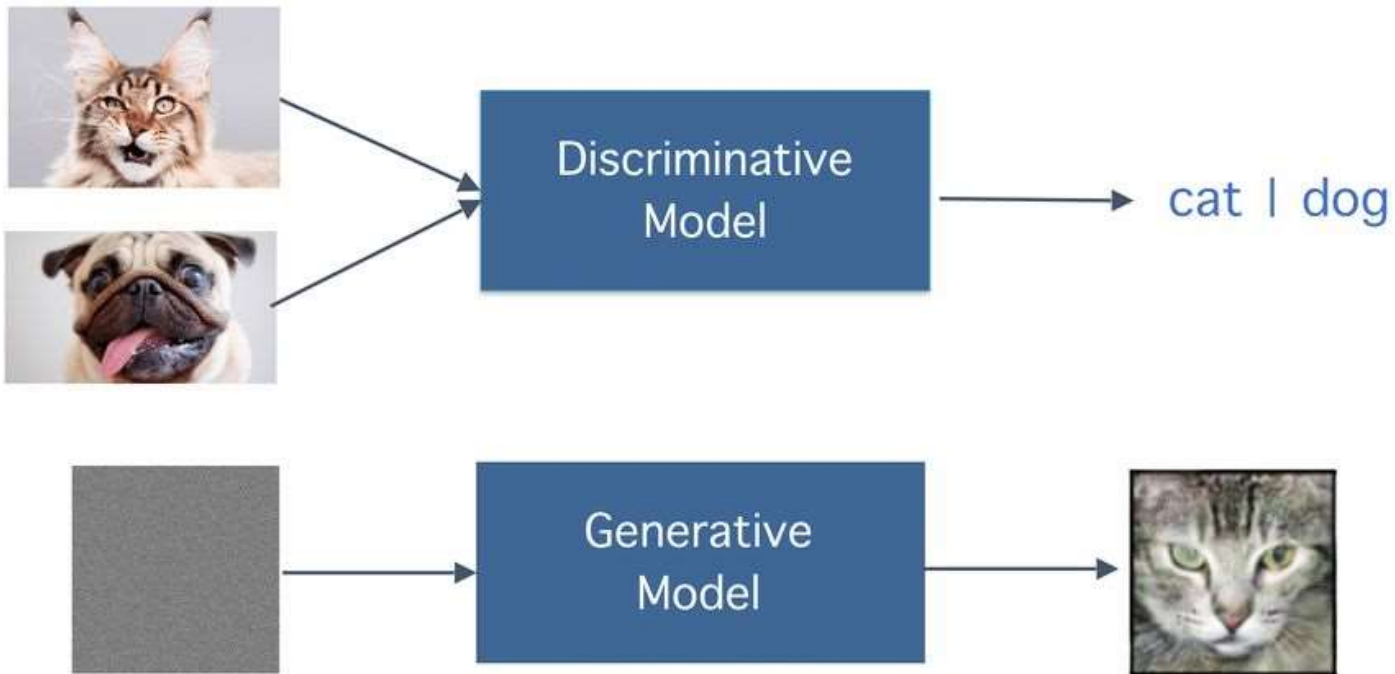
- Understand Complex Pattern from Data
- Content generation
- Build Powerful Application

Where Generative AI Exists.



- Machine Learning is the subset of Artificial Intelligence
- Deep Learning is the subset of Machine Learning
- Generative AI is the subset of Deep Learning

Discriminative vs Generative Model

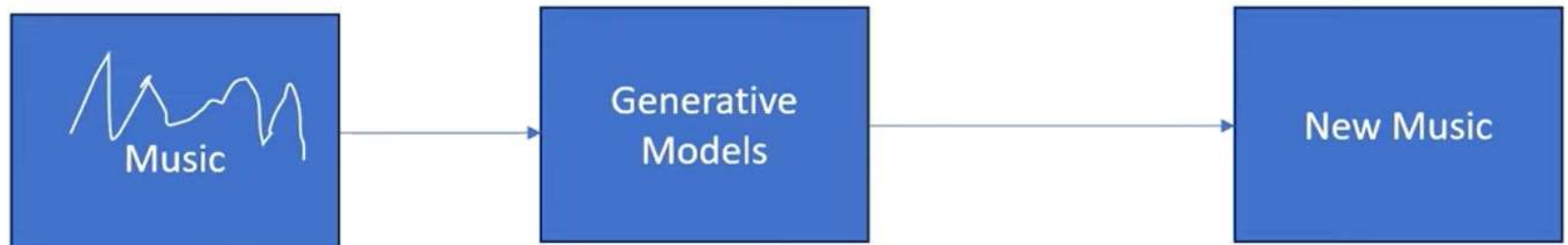


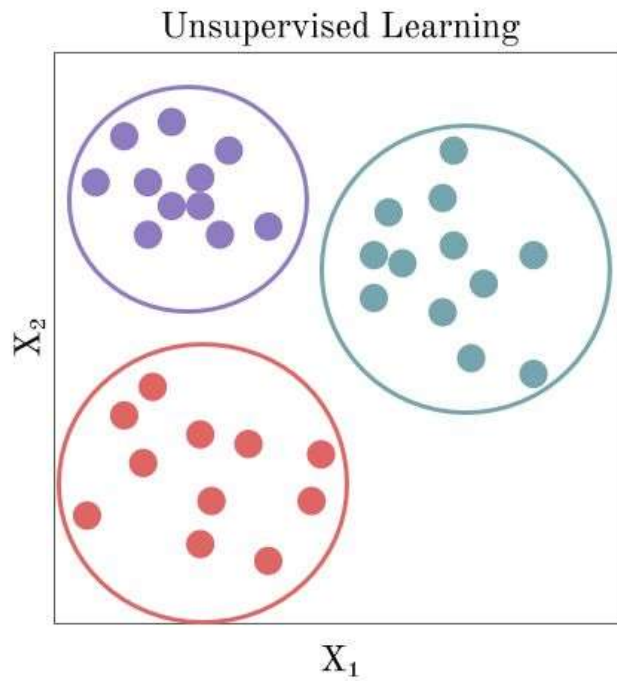
Discriminative vs Generative Model

Discriminative Models



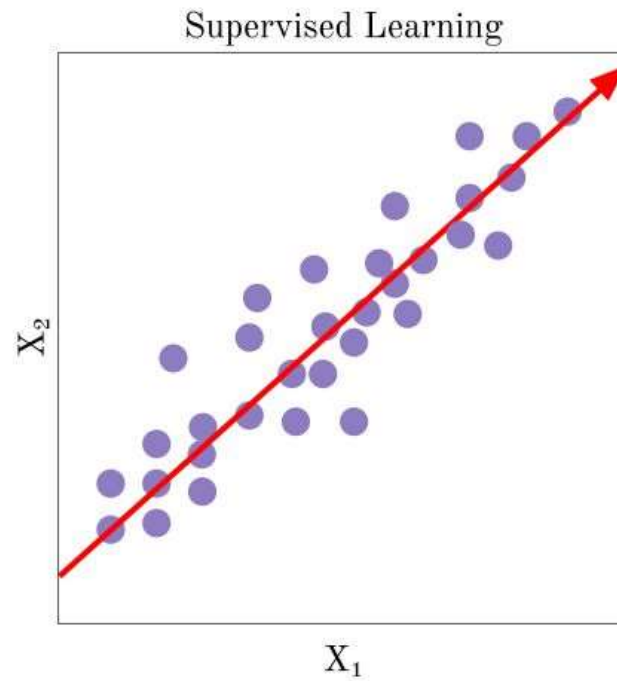
Generative Models





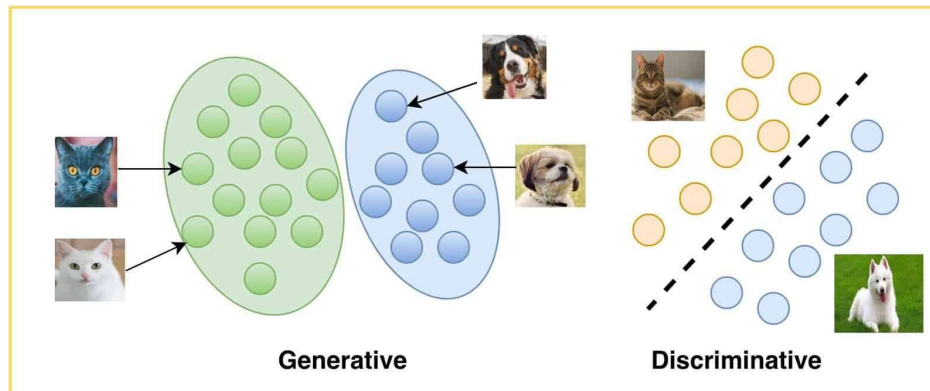
Clustering:

- K-Means
- DBScan



Classification & Regression:

Generative AI is a subset of deep learning and **Generative models** are trained on huge amount of data. While training the generative model we don't need to provide a label data, It is not possible when we have a huge amount of data, So, it's just try to see the relationship between the distribution of the data. **In Generative AI we give unstructured data to the LLM model for training purpose.**



What is LLMs?

Large Language Models (LLMs) are foundational machine learning models that use deep learning algorithms to process and understand natural language. These models are trained on massive amounts of text data to learn patterns and entity relationships in the language.

It is a language model which is responsible for performing task such as **text to text generation , text to image generation and image to text generations.**

What makes LLM so Powerful?

- In case of LLM, one model can be used for a whole variety of tasks like:-

Text generation, Chatbot, summarizer, translation, code generation

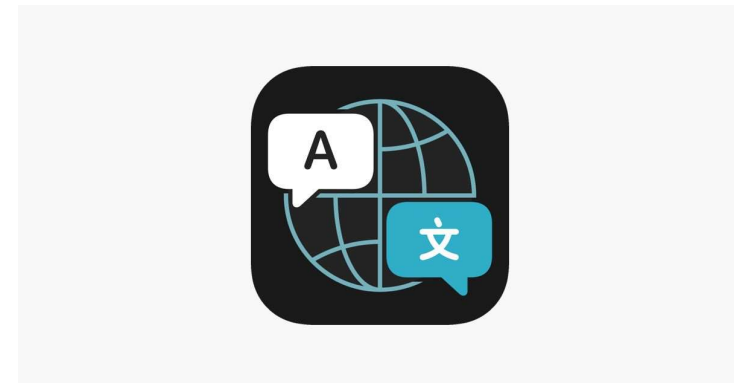
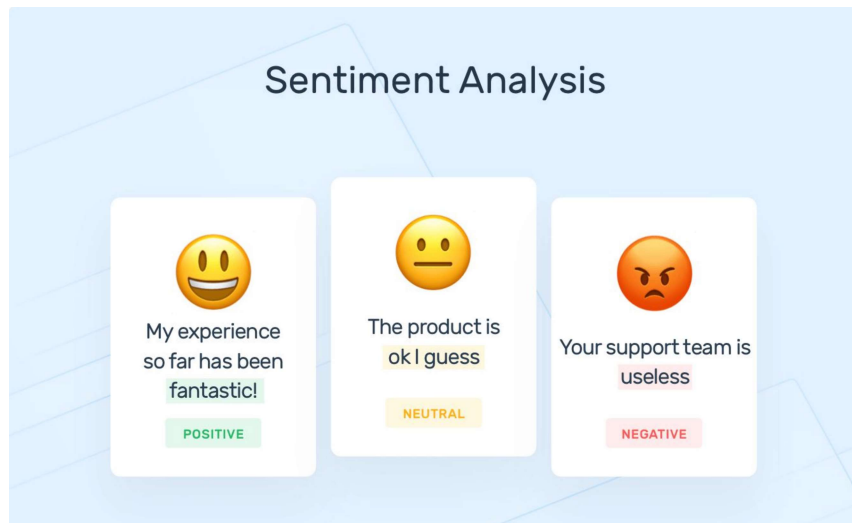
& so on ...

So, LLM is subset of Deep Learning & it has some properties merge with

Generative AI

Why LLM so Powerful?

- Train the model for a specific task



Few milestone in large language model

- Gemini
- GPT
- XLM
- T5
- Llama
- Mistral
- Falcon

Generative AI



End to end Pipeline