Generative AI

What you will learn?

- Generative AI?
- Large Language Models **(LLMs)**
- OpenAI
- Langchain
- Vector Database
- Llama Index
- Open Source LLM model
- End to End Project

Generative AI

Large language models

- **ChatGPT**
- **Google Bard**
- **Meta Llama 2**

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,
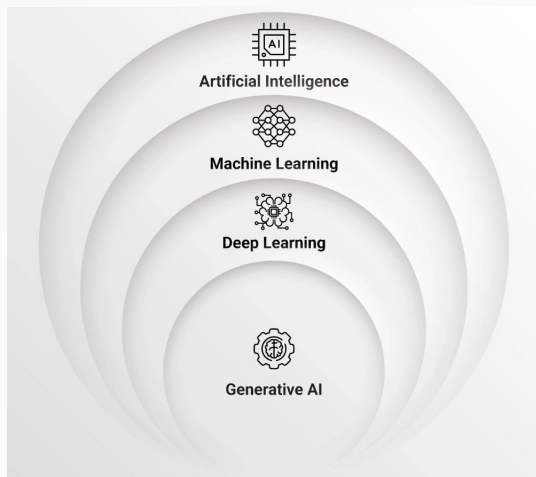
- Generative Image model
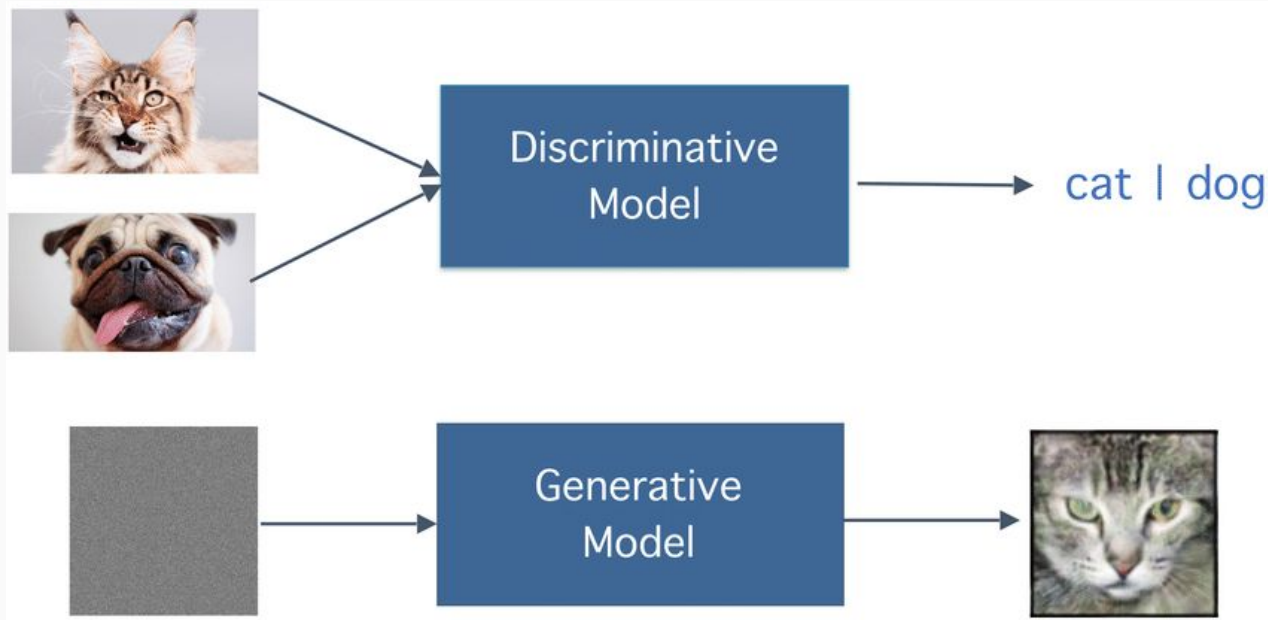- Generative Language model

Generative Model:

Questions → → Responses
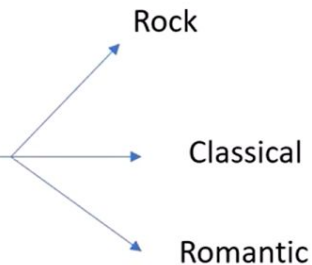
Where Generative AI Exists.

- Machine Learning is the subset of Artificial Intelligence

- Deep Learning is the subset of Machine Learning

- Generative AI is the subset of Deep Learning
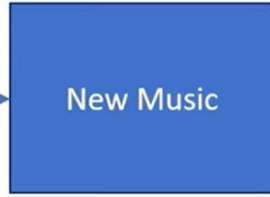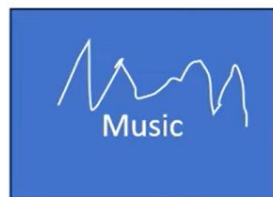
Discriminative vs Generative Model
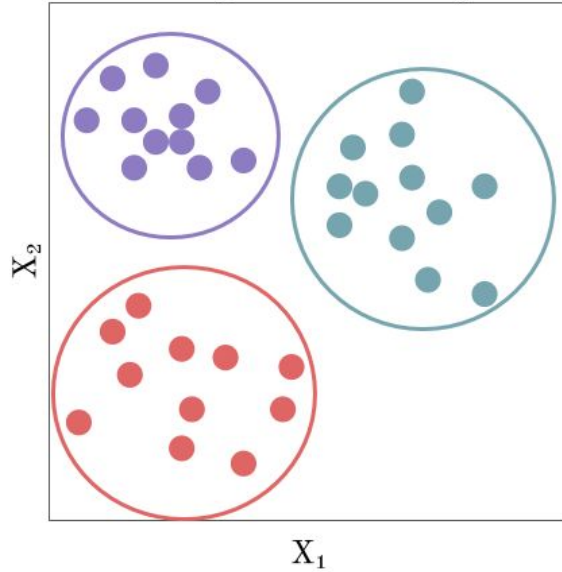
Discriminative vs Generative Model

Unsupervised Learning

X_2

X_1

Supervised Learning

X_2

X_1
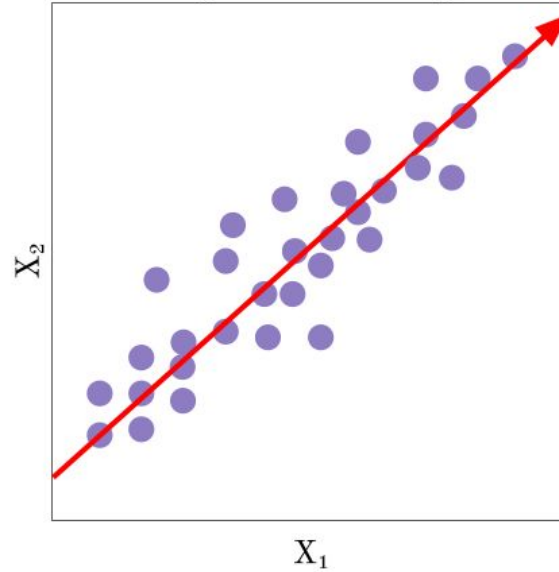
Clustering:
- K-Means
- DBScan

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.**

Generative   Discriminative
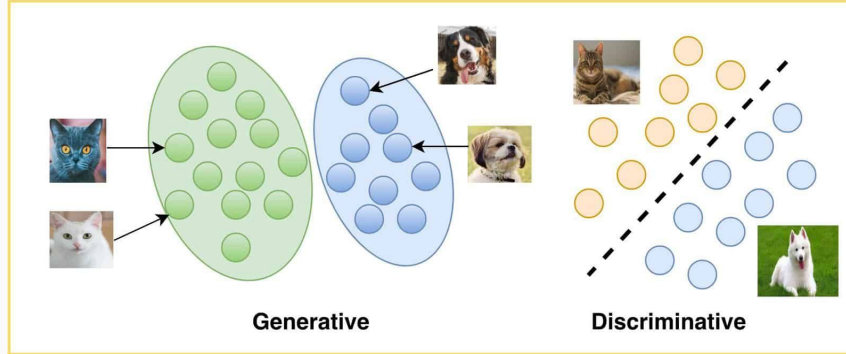
What is LLMs?

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.**
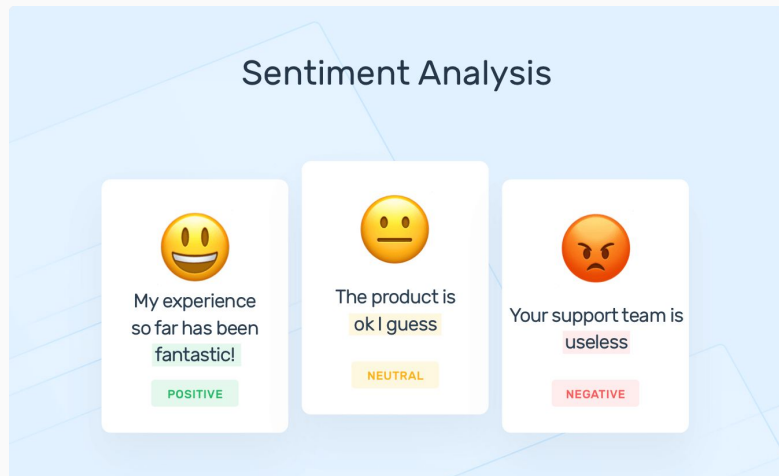
What makes LLM so Powerful?

- 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?

Sentiment Analysis

My experience so far has been fantastic!

POSITIVE

The product is ok I guess

NEUTRAL

Your support team is useless

NEGATIVE

Few milestone in large language model

- Bard
- GPT
- XLM
- T5
- M2M-100