

8 Dec Live Class

1) Setup for the courses.

2) What Generative

Generative Vs Discriminative AI

3) Architecture :- GAN

VAE

Diffusion

Multimodals

Unimodals.

(4) Layers of Architecture →

(5) Types of Architecture → Level L
Level 9
Level 3

* LLM → Types

open source



(5) →

Closed

1)

2)

3)

4)

④ Framework →

↳

→ ② AI Agent Framework →

④ How to use these Model → Download

→ Playground / Chatbot

<https://insights.encora.com/insights/exploring-the-future-of-generative-ai-top-trends-for-2024>
→ API

↳ Working → pipeline →

→ Generative AI → life cycle .

→ Future → Job profile → Interest ↗
↘

→ Tools = ↳ + Feely →

- 1) Video
- 2) Audio
- 3) code
- 4) AI Agent
- 5) Image
- 6) Models .

→ Future trends → ④ MultiModality

- ④ Resume → Hardware ↓
- * Personalized Gen AI

75

(1) → Requirements → 1) Vscode / pycharm → python

2) Jupyter

① → 3) Colab → Colab → cpu

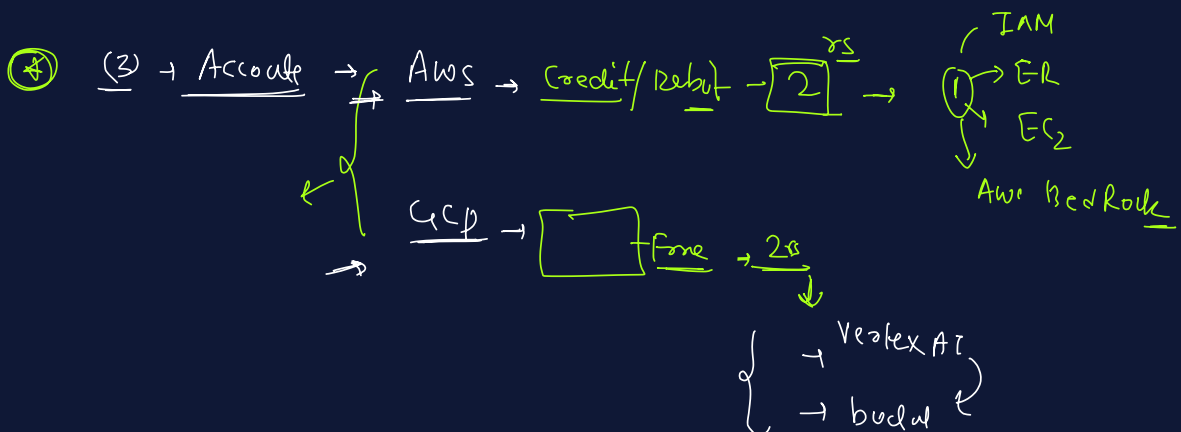
②

2, 3, 5%

③ 1) API → Open ai → paid → 5% → 300-400

→ GPT API → Free → API

→ Gemini → Free → API

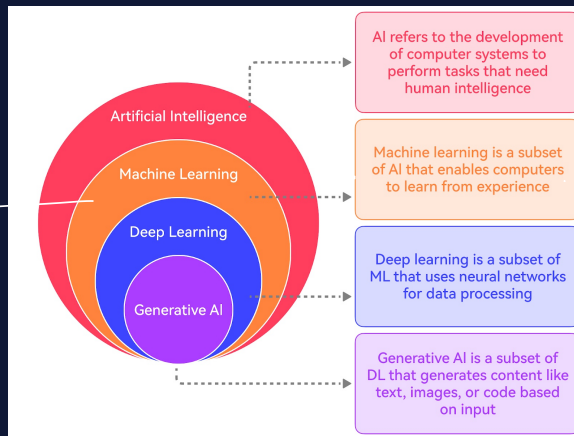


(2) → How to create API → Done → Openai / Gemini / GPT

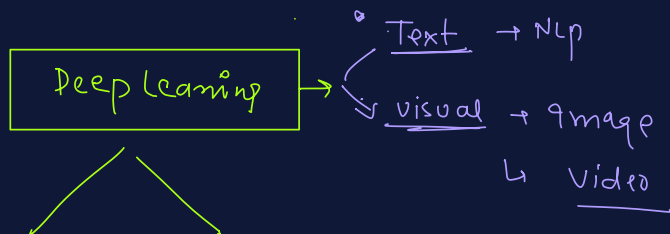
Train Model
To perform
Specific work

④ Prediction
↓

Model → weather ML



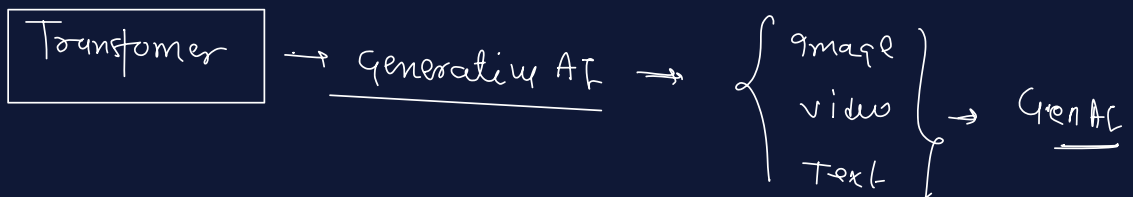
→ AI → Create some
Application that
do not require
Human Input

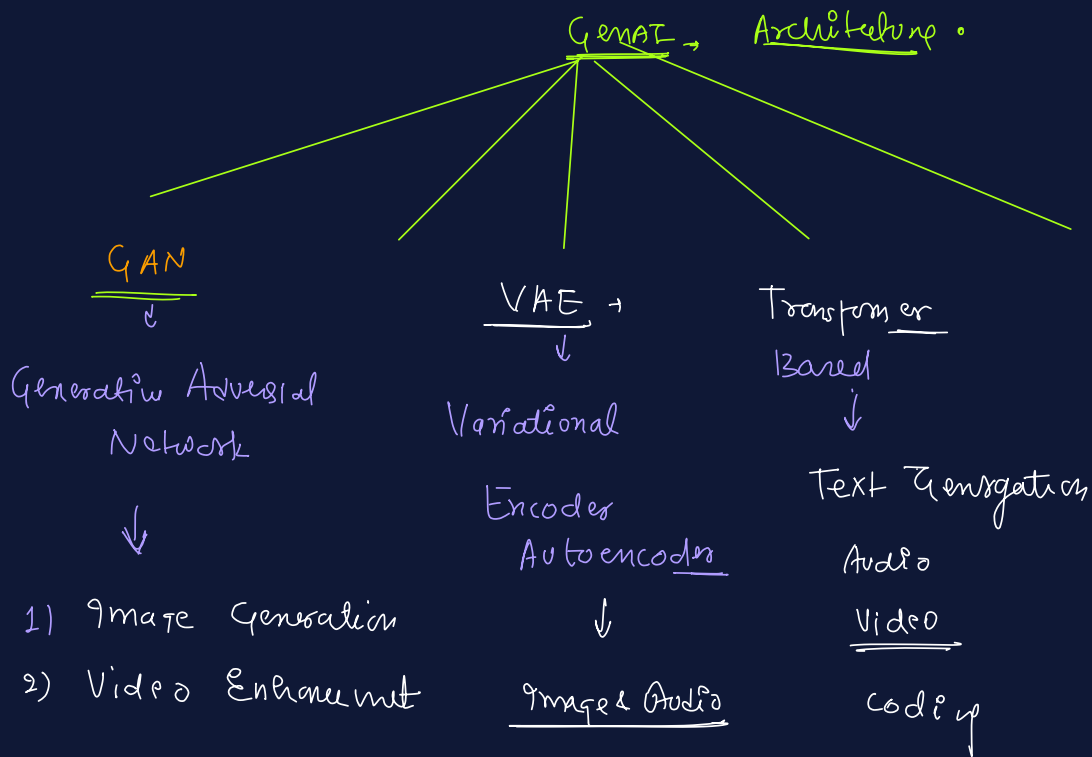
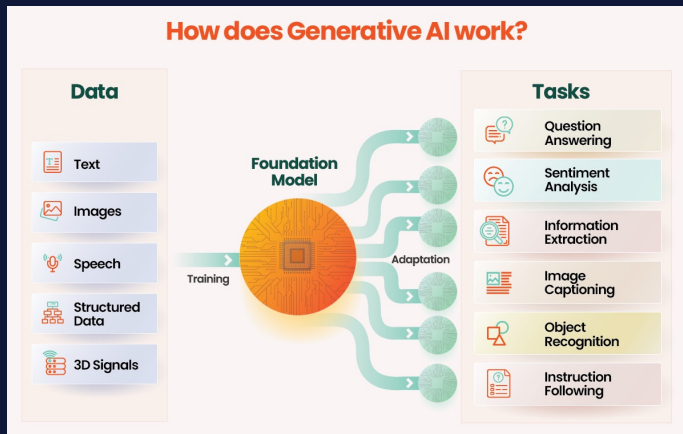


Computer Vision

Natural Language processing

Generative AI





Diffusion → Higher Quality Output → Image Synthesis

MultiModal ⇒ Multiple type Input →

- Text
- Video
- Image

11 Types of Generative AI Models



GAI Insights

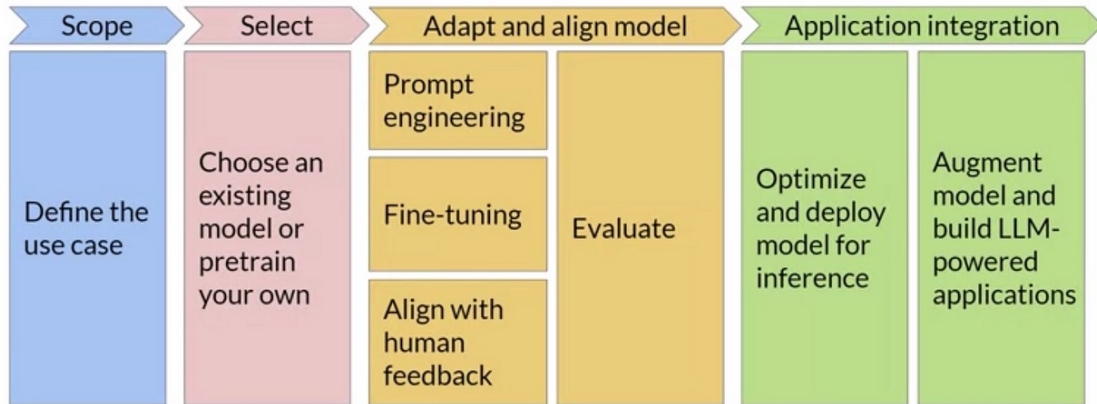
<p>Text-to-Text</p> <ul style="list-style-type: none">- ChatGPT- Bing Chat- Bard- LLaMa (Meta)- Claude- ...many more	<p>Text-to-Image</p> <ul style="list-style-type: none">- Midjourney- DALL-E 3- Stable Diffusion- Muse- Imagen- Bard	<p>Image-to-Text</p> <ul style="list-style-type: none">- ChatGPT- LLaVA- BakLLaVA- Flamingo- Visualart	<p>Image-to-3D</p> <ul style="list-style-type: none">- Dream Fusion- Magic3D	<p>Image or Video-to-3D</p> <ul style="list-style-type: none">- CSM AI	
<p>Text-to-video</p> <ul style="list-style-type: none">- Runway- Cuebriic- D-ID- Sad Talker	<p>Text-to-Code</p> <ul style="list-style-type: none">- GitHub Copilot- Amazon CodeWhisperer- Google Codev	<p>Image-to-Science</p> <ul style="list-style-type: none">- Galatica- Minerva	<p>Text-to-Speech</p> <ul style="list-style-type: none">- ElevenLabs- Speechify- Murf.AI- AudiLM	<p>Speech-to-text</p> <ul style="list-style-type: none">- Whisper	<p>Speech-to-Speech</p> <ul style="list-style-type: none">- ElevenLabs



② Architecture level →

Artifact layer →

Life Cycle of Generative project →



Profile →

Jobs emerging from the adoption of large language models



Large language models (LLMs) will transform collaboration between humans and AI, reshaping job roles. While outcomes remain uncertain, potential new job areas could emerge with LLM adoption.



AI Model and Prompt Engineers



Interface and Interaction Designers



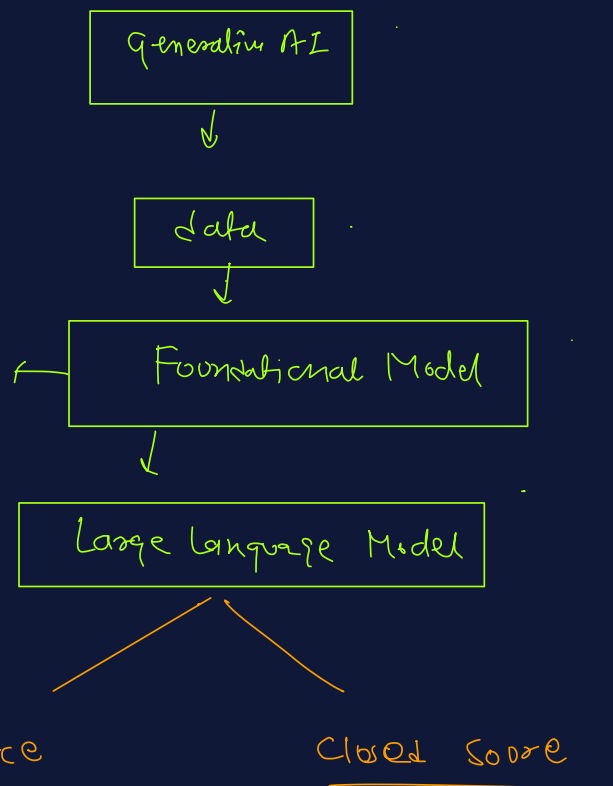
AI Content Creators

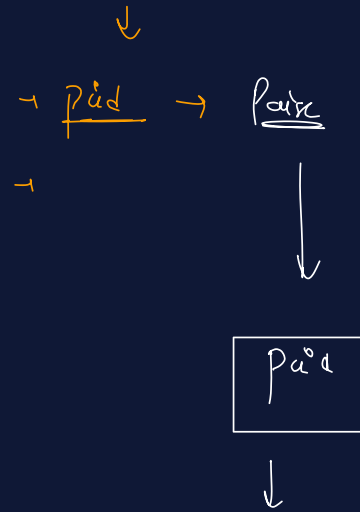
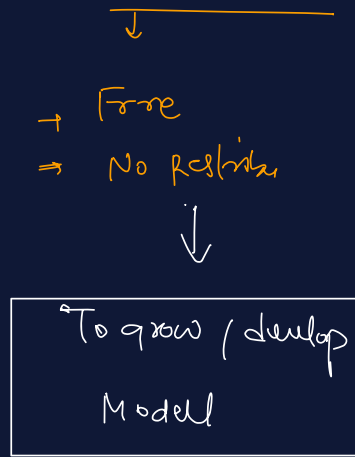


Data Curators and Trainers



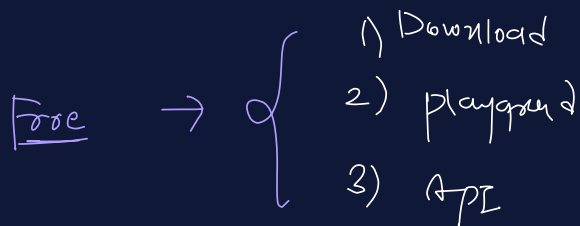
Ethics and Governance Specialists





- | | |
|---------------------------------|-----------------------|
| 1) Llama → 3.1, 3.2, <u>3.3</u> | → 1) Openai |
| 2) Mistral → | 1) openai |
| 3) Bloom → | 2) Gemini |
| 4) Grog → | 3) Claude - Anthropic |
| 5) Falcon → | |

⊕ 1) How to use →



- Download ⇒
- | | | |
|-----------------|-----|-------------------------------|
| 1) Hugging Face | - 1 | } - <u>Free</u> (open source) |
| 2) LM studio | - 2 | |
| 3) ollama | - 3 | |

API → Gemini → Goog → peo → Goog →

Playrpg → LMstudio
Mistral } →

Mistral

* Best Model → Llama 3.3 → Best
→ Open ai O1 pro - Model
→ Context Window → 128k million
Owen 2.5

④ Framework ⇒ Generale → Langchain, Hugging, Llamaindex
↓
→ AI Agent →
↓
1) Langgraph
2) Autogen →
3) Crew AI

