

Intro to Language Modeling

- Lang modeling is working horse for all the large language model and even state of the art (SOTA) Gen AI.

language modeling is the task that is use in LLM and Gen AI, transformers

- What is model?

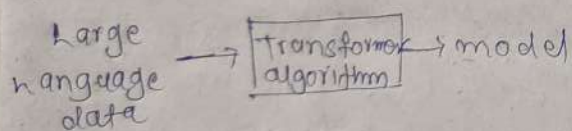
→ Model is a mathematical relationship captured between input & output.
Model is used to predict the outcome of an unseen query point

Q: What is language model?

→ Its a model that captures relationship betⁿ words and sentences of a language is called as language model.

Q: Why language modeling to do?

→



Transformer are multi model they can take multiple type of inputs eg. text with image

Example of large language models

- ① GPT-4/3.5 → open ai
- ② BERT → google
- ③ Gemini → google
- ④ Llama-2 → facebook/meta

Transformer is multimodality :- They have capability of a take multiple type of inputs

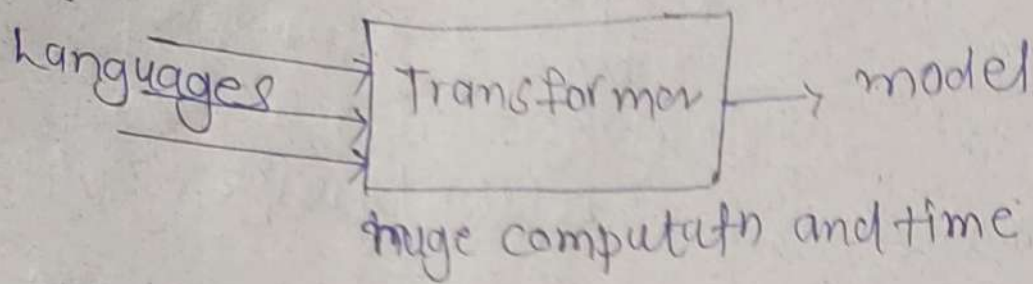
All above 4 model come up with multimodality.

Q: What can we do with language model?

Applications :-

- ① Build auto complete feature :- mobile, chatting, keyboard auto complete sentence
- ② Summarize the text.
- ③ Build better chat bot
- ④ Build QA system etc

Q:- How do you model a language?



Algorithm \rightarrow Transformer

Technique/app :- ① Auto Encoding task
② Auto Regression task

Every large language model is train either ① approach or ② approach.

① How do we build a language model
They can build using either one of the above task.

② Auto encoding ③ Auto regressive

+

Huge amount of data

+

powerful Architecture
(Transformer)