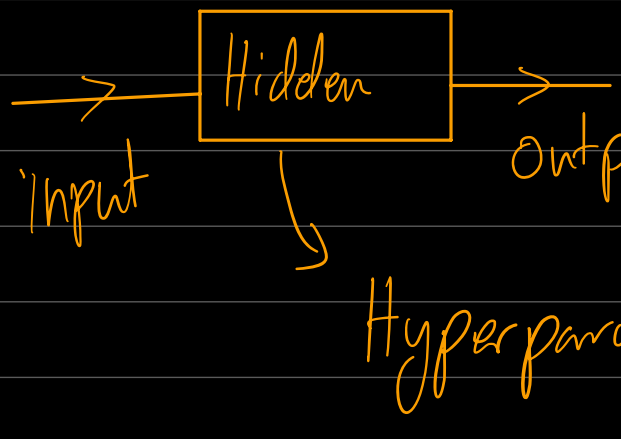
Deep Learning :-

1. ANN → Artifical Neural Networks
2. CNN → Convolutional Neural Networks
3. RNN → Recurrent Neural Networks
4. RL
5. GAN

---

1 -

classification or Regression



---

2 -

Image type / Grid type Data

feature extraction using a Filter

↳ Pooling → Flatten

Convolution + ANN

3-

Sequence Related Data

Feed back loop for every time stem

Generative AI → Superset

(1) GAN

i) Image to Image GAN

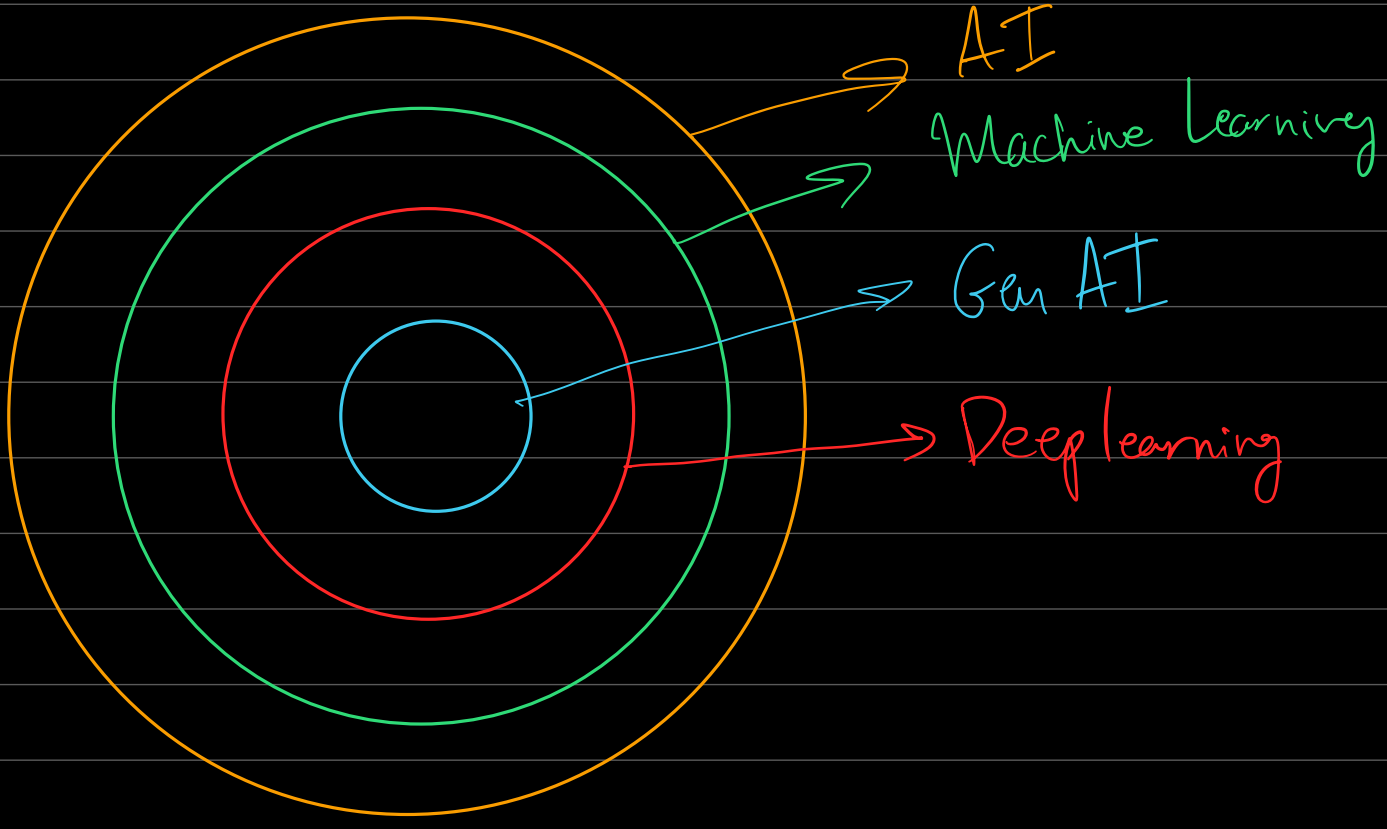
② LLM

Generation → GAN

ii) Text to Text Generation → LLM

iii) Image to Text Generation → LLM

iv) Text to Image Generation → LLM

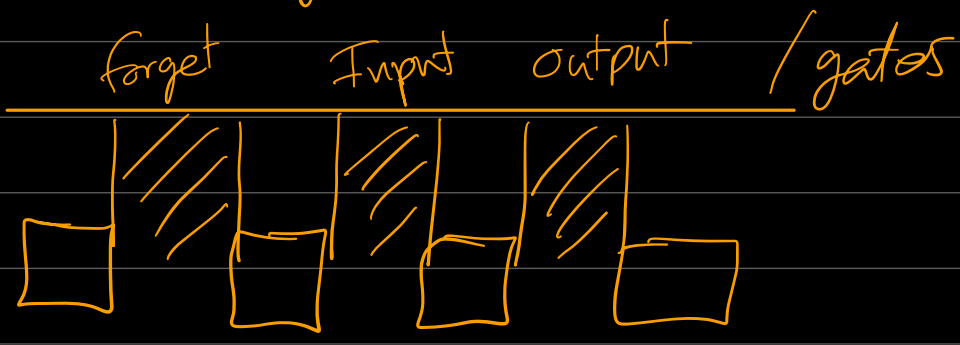


① RNN → Short term memory

② LSTM → Short - Long term memory

③ GRU => 2014

↳ 2018 - 2019



Seq. → Sequence Data

Mapping Techniques :-

- One to One
- One to many
- many to One
- many to many

Image Capturing.

(RNN
LSTM
GRU)

Language Translation

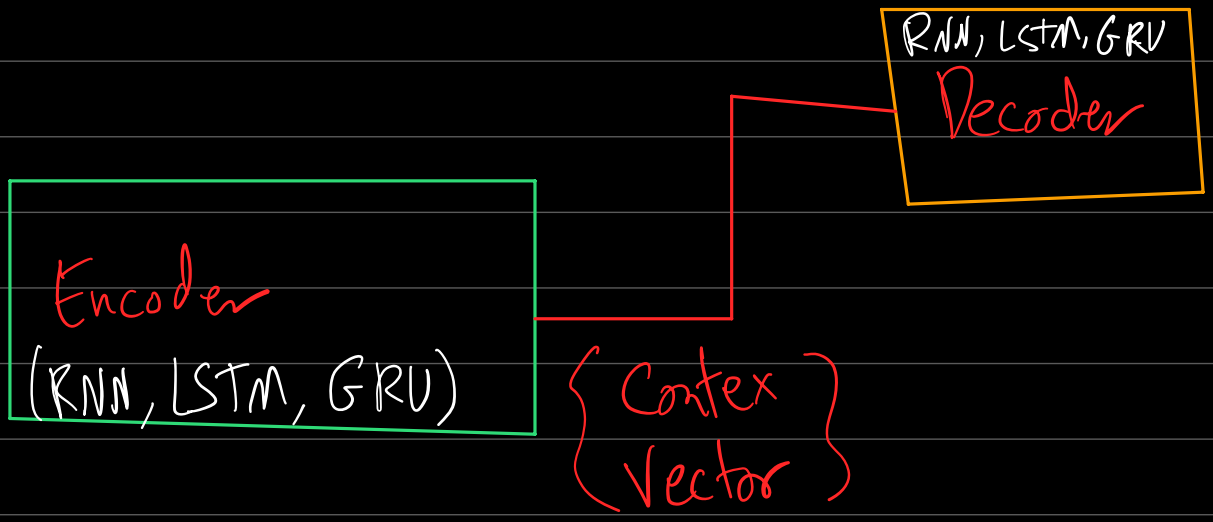
Sentiment Analysis

Paper

Sequence to Sequence Learning

(encoder to decoder)

(Input 5 words → Output 5 words)



↳ wrapping all the information

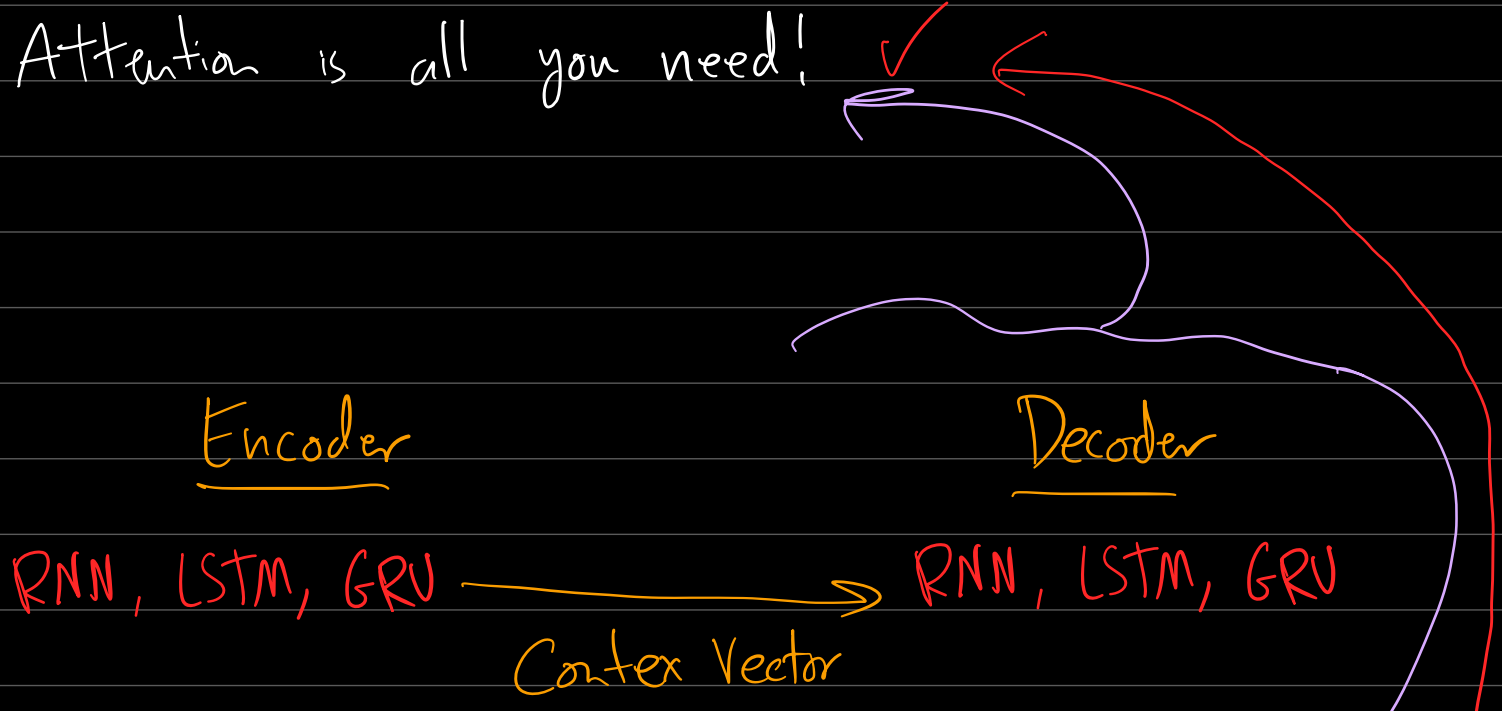
Reading List :-

(Attention)

Sequence to Sequence Learning ✓

Neural Machine Translation with Attention ✓

Attention is all you need! ✓



Attention layer

Encoder

Decoder

Base Archeticture:-

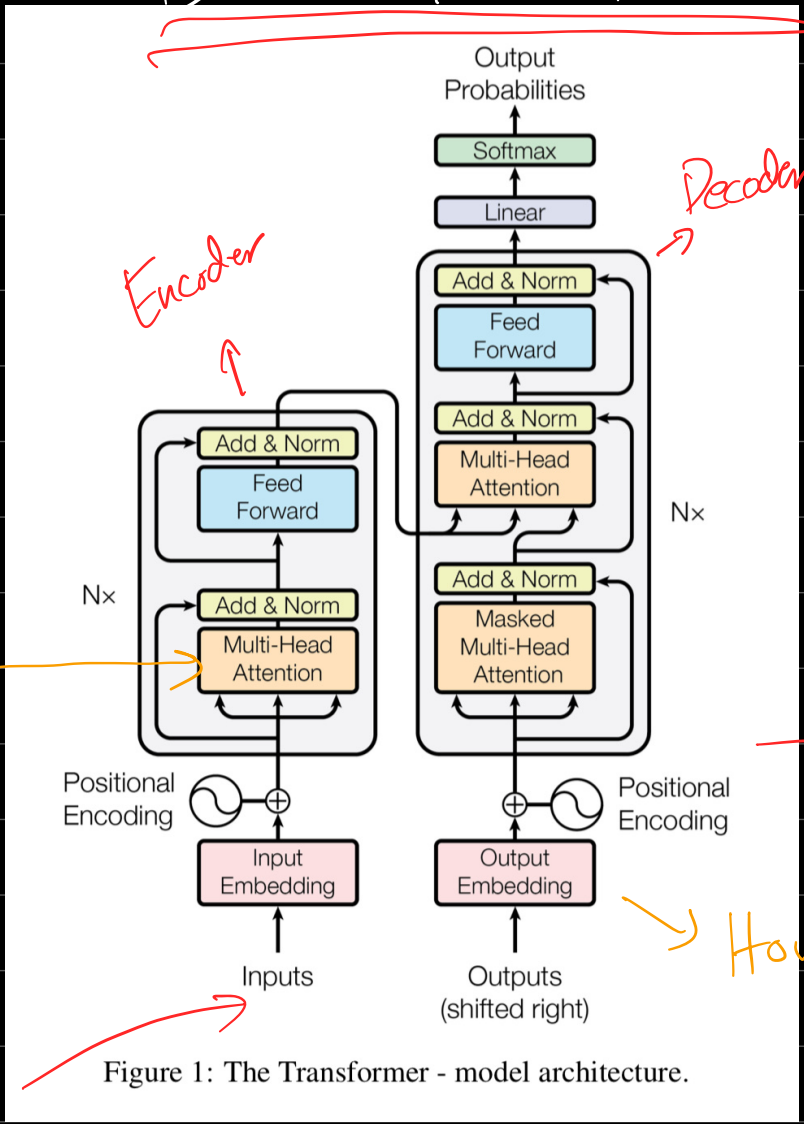


Figure 1: The Transformer - model architecture.

Encoder

Decoder

I am Sunny

No [RNN LSTM GRU] !

Timestamp

How you want the output?

Pass the input Parallely