

Additional data :-

1) Loss Function

Vs

Cost Function

① A loss function is a way to measure how wrong a ML model is when it makes prediction.

A cost function is a way to measure how well a ML model is performing overall by calculating avg error across all prediction.

eg MSE (mean squared error)

MAE, MSE

Cross-entropy (loss)

② Better prediction = smaller loss

Smaller loss = Better prediction

③ measure of error for single prediction

measure avg error across all prediction

④ focus on one datapoint

focus on entire dataset.

2) What is ANN?

→ An ANN is a ML learning model inspired by how human brain works. It design to process information recognize pattern and make decision by mimicking the structure and functioning of biological neuron.

In simple terms :-

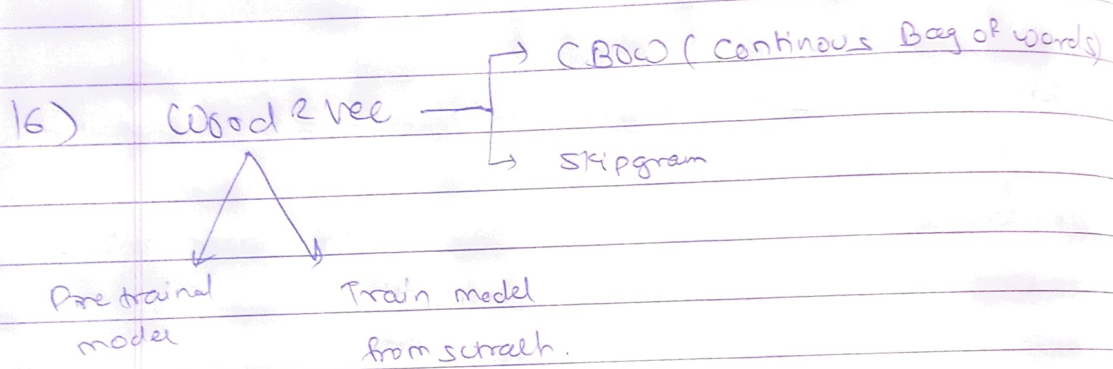
ANN is system made up of layer of nodes (neurons) <sup>connected to each other</sup>. Each node process information and passes to next layer.

The NN learns by adjusting these connection based on dataset.

3) What is Optimizers?

An optimiser is a tool or algorithm used in machine learning to improve a model adjusting its parameters like (weights & biases) during training.

The goal is to minimize the cost function and make the model perform better.



1) CBOW (continuous bag of words) :-

Corpus - Dataset

[ Apple is @ first company who cross 1 trillion dollar market cap ]

Window size = 5 (odd number)

I/P	O/P
Apple, is, first, company	9
is, a, company, who	first

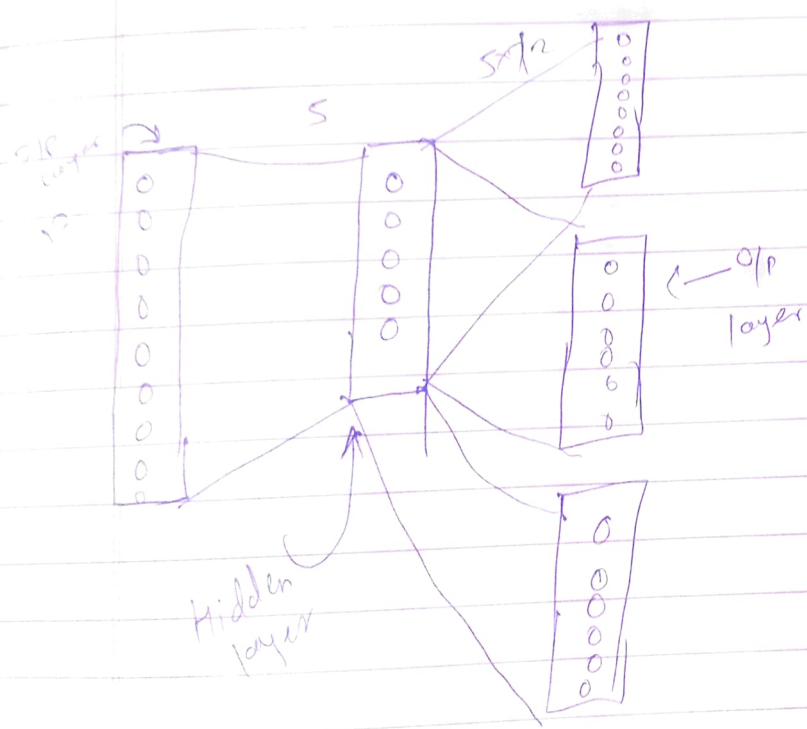
# Skipgram:

Apple is a first company who gross 1 trillion \$ market cap

vocab size = 12

window size = 5

I/P	O/P
a	Apple, is, first, company
first	is, a, company, who



Q. when should we apply Skipgram & CBOW →

Small Dataset → CBOW  
Huge Dataset → Skip gram

## Advantages of word2vec

- Data matrix
- Semantic info get capture
- Vocab fixed set of dimension.
- OOV is also solved