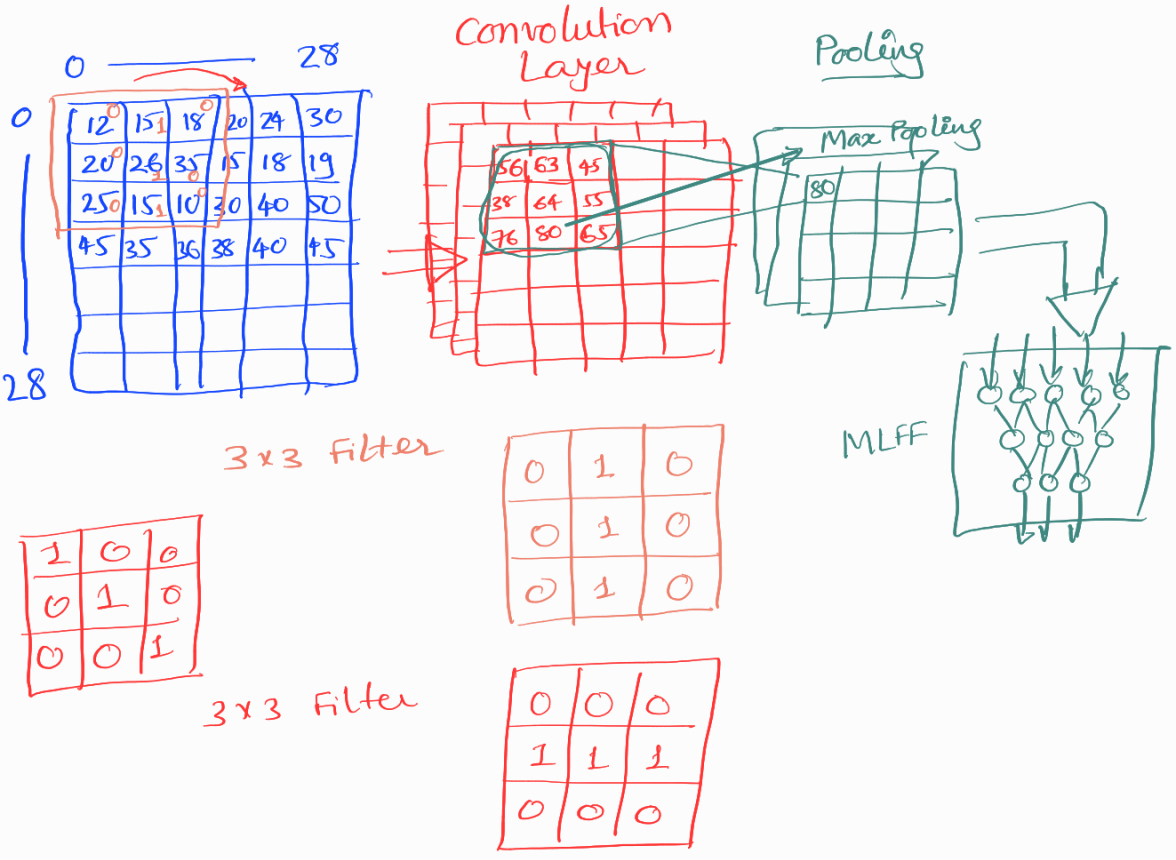
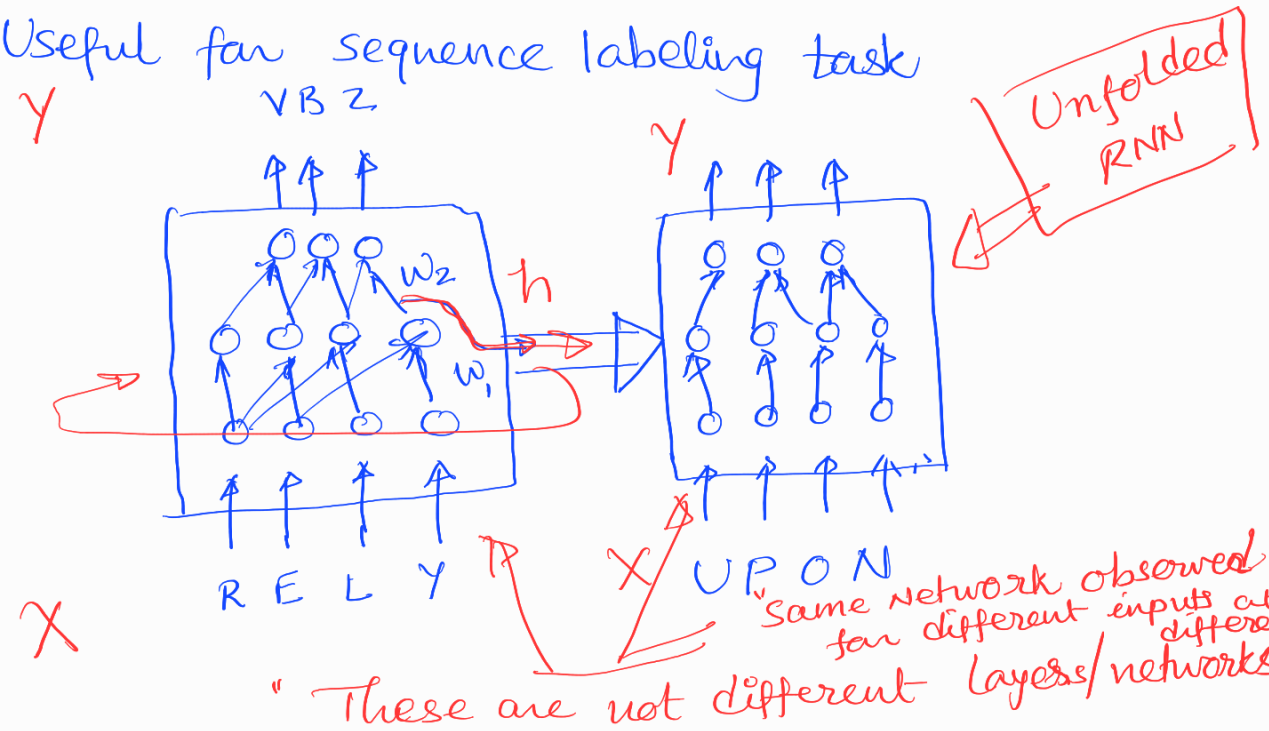
Deep learning: Multiple layers with well defined role.

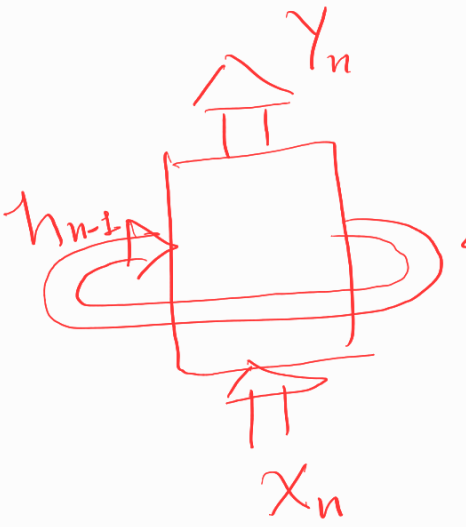
① CNN: Convolutional Neural Network



Recurrent Neural Network (RNN)

- Useful for sequence labeling task





How many time & this will reoccur ?

"Length of the sentence"

"Ram eats an apple"

5

Input layer : | A | P | P | L | E |
1 2 3 4 5

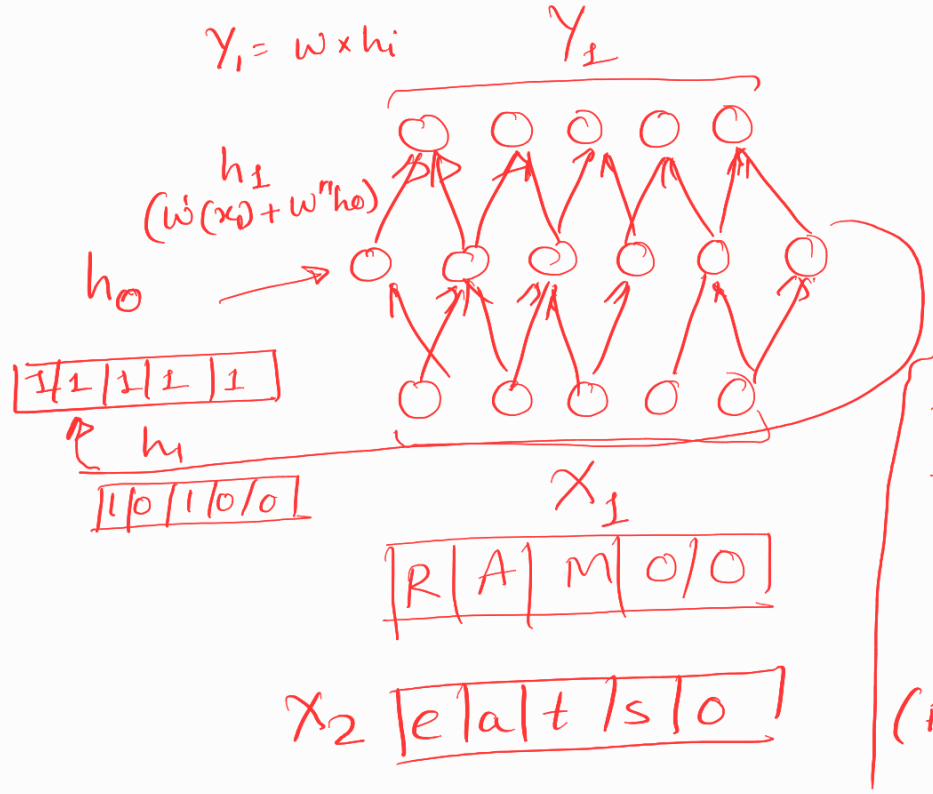
→ Padding

| R | A | M | 0 | 0 |
1 2 3 4 5

Output layer : No of POS Categories

NN, NP, VB, ADV, ADJ

(5)



$Y_n = f(X_n, h_{n-1})$

$Y_n = f(X_n)$

- POS
- Speech to Text
- Machine Translation
- Language Generation

(Fill the missing word, predict the next word)

Pretrained Models : Transformer based

Libraries

- Tensorflow
- pytorch

BERT

HuggingFace