Road Map

VScode and github

1. Install VScode, Jupyter Notebook, conda environment on local machine (optional- Google Colab)
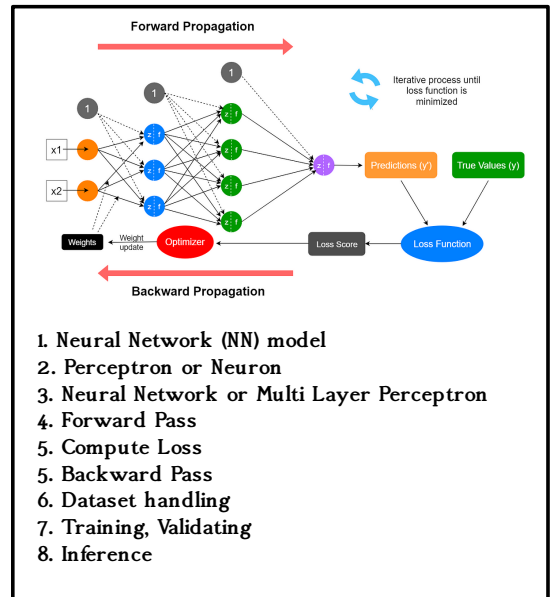2. Use Git and github

Python

1. Python programming fundermentals
2. Python object-oriented programming
3. Learn how to use python frameworks and packages
   - Numpy (arrays, cpu)
   - Matplotlib (plotting)
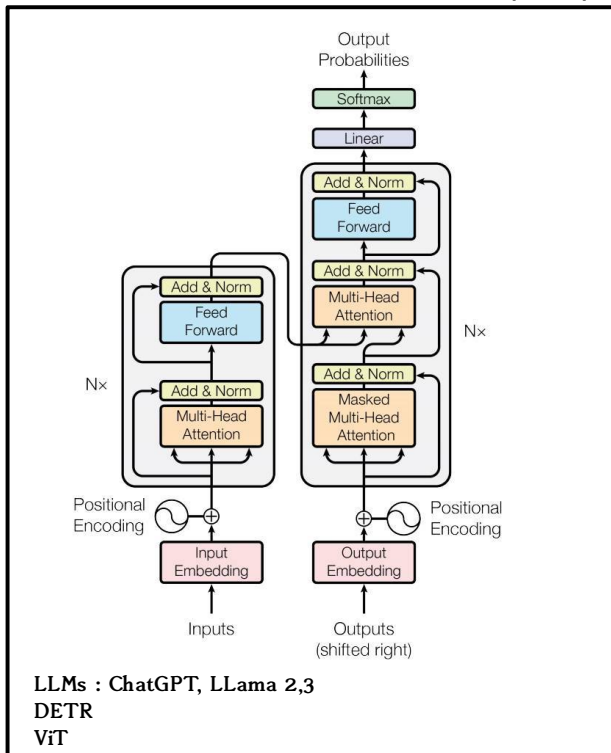   - Pytorch ((tensor, gpu) famous deep learning framework)

Practice Examples
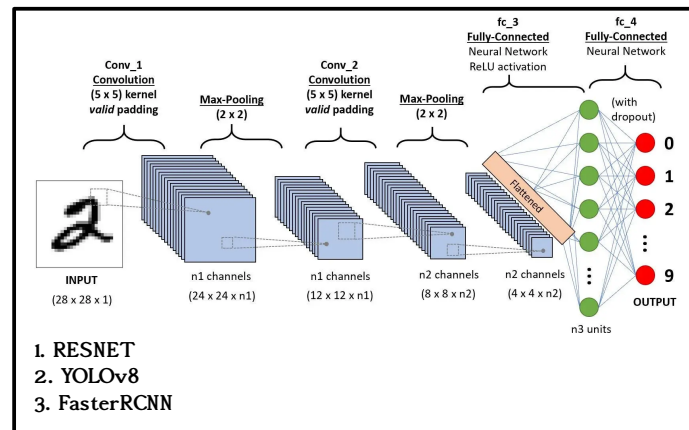
1. Training examples Neural Network

1. Deep Neural Network (DNN)

1. Neural Network (NN) model
2. Perceptron or Neuron
3. Neural Network or Multi Layer Perceptron
4. Forward Pass
5. Compute Loss
5. Backward Pass
6. Dataset handling
7. Training, Validating
8. Inference

Transformer Neural Network (TNN)

LLMs : ChatGPT, LLama 2,3
DETR
ViT

2. Convolution Neural Network (CNN)

1. RESNET
2. YOLOv8
3. FasterRCNN

3. Recurrent Neural Network (TNN)

1. LSTM
2. GRU