#WEEK 1-2

Completed the Machine Learning Crash Course.
It covered basics of the following topics -

1) Basic Terminologies :
    - Features
    - Labels
    - Models
    - Regression
    - Classification
    - Losses
    - Hyperparameters
2) Introduction to TensorFlow
3) Overfitting and Underfitting
4) Splitting data into :
    - Training (To train the model)
    - Validation (For Hyperparameter tuning, Also helps to check overfitting)
    - Testing (To test the model)
5) Feature Engineering (Creating features from raw data)
    - Numerical Values
    - Categorical Values
6) Feature Crosses (To Introduce Non-Linearity)
7) Regularization (Prevent Overfitting) :
    - L2 Regularization (To reduce sum of square of weights)
    - L1 Regularization (To reduce sum of absolute value of weigths)
8) Logistic Regression
    - Sigmoid Function
    - Log Loss
9) Classification
    - Threshold
    - True Positives(TP), True Negatives(TN), False Positives(FP), False Negatives(FN)
    - Accuracy { (TP+TN)/(TP+TN+FP+FN)}
    - Precision{ {TP/(TP+FP)}
    - Recall {TP/(TP+FN)}
    - Prediction Bias (Difference of average of predicted value and observed values)
10) Neural Networks
    - Nodes
    - Hidden Layers
    - Activation Functions
        - Sigmoid
        - ReLu
11) SoftMax (Extends Idea of logistic regression to multiple classes