**Basic Concepts of Machine Learning**

**Bias:** Bias is nothing but the difference between the actual value and predicted value by the model. When we say high bias means difference between actual and predicted value is high and when we say low bias means difference between actual and predicted value is low.

**Variance:** Variance is simply means who much scattered the predicted values w.r.t each other. If we say low variance means values are scattered less means they are very near to each other’s whereas high variance means values are scattered more.

**Over fitting:** When the model perform well in training data but not able to perform relatively well on test data then it is over fit. (Low bias, high variance).

**Under fitting:** When the model perform poor with training data as well as test data then it is under fit. (High bias, high variance).

**Regularization:** Regularization is technique used to avoid over fitting scenario. It has basically to methods L1 – Lasso regression and 2nd one is L2 – Ridge regression.

**from sklearn.linear\_model import Ridge**

**from sklearn.linear\_model import Lasso**

Lasso- Least absolute shrinkage and selection operator

