**Performance Metrics**

There are multiple metrics used to measure the performance of an ML model on the testing data. Some of the important metrics are :

**MSE**

The average of the squares of the errors—that is, the average squared difference between the estimated values and the actual value—is measured by the mean squared error or mean squared deviation of an estimator. MSE is a risk function that represents the squared error loss's anticipated value.

**RMSE**

The root-mean-square deviation, also known as root-mean-square error, is a commonly used metric for comparing values predicted by a model or estimate to values observed.

**MAE**

It is the average of all the absolute errors or alternatively the difference between two given continuous variables.

**MAPE**

In statistics, the mean absolute % error, also known as mean absolute percentage deviation, is a measure of a forecasting method's prediction accuracy.



**R - Squared**

The coefficient of determination, abbreviated as R2 or r2 and pronounced "R squared," is the percentage of variance in the dependent variable that can be predicted by the independent variable.

**Correlation Index**

The Pearson product-moment correlation coefficient, often known as Pearson's r, is a measure of linear correlation between two sets of data.

r =

**Kurtosis**

Kurtosis is a measure of how "tailed" a real-valued random variable's probability distribution is.

**Phillips perron test**

The Phillips–Perron test is a unit root test. In time series analysis, it is used to test the null hypothesis that a time series is integrated of order one.

**Jacques-bera test**

The Jarque–Bera test determines if sample data contain skewness and kurtosis that are similar to a normal distribution.

= n

where,