1) Evaluation metrics:

i. Kolomogorov Smirnov chart

- Classification models performance will be measured by this chart.
- It measure the separation between positive and negative distributions where the positives and negatives will be divided into 2 groups.
- It will fall between the values 0 to 100.
- It will be mostly used in classification problems
- The more the KS value the more differentiation between the positives and negatives.

ii. Gini coefficient

- It is dervied from AUC ROC number.
- It is also called as Gini index or Gini ratio
- The ration between the area between the diagonal line and ROC curve and the area above the triangle.
- Formula
  - 2*AUC-1 = Gini

iii. Log Loss:

- It requires the probability of valules to create the Log loss report of the given data set
- It will provide the negative average log for predicted probabilites of each instance.

$$-\frac{1}{N}\sum_{i=1}^{N} y_i \cdot log(p(y_i)) + (1 - y_i) \cdot log(1 - p(y_i))$$

Formula for logloss method

- p(yi) is positive class predicted probability
- 1-p(yi) is negative class predicted probability.