Model Evaluation

Accuracy, Recall, Precision and F-Score

$$Accuracy = \frac{TP + TN}{(TP + TN + FP + FN)}$$

$$Recall = \frac{TP}{TP + FN}$$

$$Precision = \frac{TP}{TP + FP}$$

$$F - Score = \frac{Accuracy + Precision}{2}$$

Explained variance score and R-squared

$$R^2 = 1 - \frac{RSS}{TSS}, RSS = \sum_{i=1}^{n} (y_i - \hat{y}_i)^2 = \sum error^2$$

$$Explained\ Variance\ Score = 1 - \frac{Var(\hat{y} - y)}{TSS}, Var(\hat{y} - y) = Var(error)$$

Therefore, if $E(error) = 0, Explained\ Variance\ Score = R^2$

Mean Absolute Error and Mean Squared Error