CHAPTER 9

RESULT ANALYSIS

True Positive: It is an outcome where the model correctly predicts the positive class. The outcome is considered as true positive when the system can correctly predict that an incident has indeed occurred.

True Negative: It is an outcome where the model correctly predicts the negative class. The outcome is considered as true negative when the system can correctly predict that the particular incident has not occurred.

False Positive: False Positive is an accuracy measure where the model mispredicts the positive class. The outcome is considered as False Positive when the system cannot correctly predict that the particular incident has occurred.

False Negative: False Negative is an accuracy value where the model mispredicts the negative class. The outcome is considered as False Negative when the system cannot correctly predict that the particular incident has not occurred.

Specificity: Specificity is defined as the measure of the proportion of true negative, which is the actual number of negative cases that are predicted as negative. Simultaneously, another proportion of actual negative values, which got predicted as positive, are termed as a false positive rate. The sum of specificity and false positive rate value will always be 1. Mathematically, specificity can be calculated as the following:

Specificity = (True Negative) / (True Negative + False Positive)

The higher value of specificity would mean a higher value of true negative and lower false-positive rate. The lower value of specificity would mean a lower value of the true negative and higher value of false positive.

Precision: The proportion of positive predictions that is actually correct.

Precision = TP / (TP + FP)

Recall: The proportion of positive observed values correctly predicted. (The proportion of actual defaulters that the model correctly predicts)

Recall = TP / (TP + FN)

Algorithm	Recall	ROC	Accuracy (%)
KNN	**84.44**	**87.15**	**88.28**
Logistic Regression	**85.03**	**88.10**	**86.64**
Support Vector	**84.72**	**87.28**	**88.20**
Decision Tree	**81.24**	**85.25**	**84.27**

Table 9.1: Comparison of Accuracy Results