

Assignment no: 2

Results:

In the given assignment after performing necessary experiments we have observed the following results:

- **Classification report:**

	precision	recall	f1-score	support
0	0.93	0.92	0.92	5095
1	0.72	0.75	0.73	1422
accuracy			0.88	6517
macro avg	0.83	0.83	0.83	6517
weighted avg	0.88	0.88	0.88	6517

- **Confusion matrix:**

	Positive(predicted)	Negative(predicted)
Positive(predicted)	4687	408
Negative(predicted)	360	1062

We have split the dataset with 80% in the train set and remaining 20% for test set. We have trained our decision tree model with train set and then evaluate it on test set. Our model performs with an accuracy of 0.8821543655056008 on test set.

Observations:

- In this dataset we have few columns that are originally in string format so we replaced them with corresponding integer values for model training and evaluation.
- There are few null and Nan (Not a number) entries so we have replaced such entries with mean (for null values) and median (for Nan) values of the corresponding attribute.