Mayank Raj
B19CSE053

Date: / /
Page No.:

Lab report - 1

Comparing ~~acc~~ accuracy different thresholds

1) Threshold = 0.5 (given)

~~Accuracy = 61.5814 ...~~

Y_out \ Y_pred	0	1
0	5421	2454
1	3600	4279

Logistic Regression

	0	1
0	5519	2360
1	2832	5047

Random Forest -

⇒ Accuracy of Random Forest > Accuracy of Logistic regression

⇒ Precision of Random Forest > Precision of Logistic Regression

⇒ Recall of Random Forest > Recall of Logistic regression

⇒ F1 score of Random Forest > F1 score of Logistic regression.

Date: / /
Page No.:

2) Threshold = 0.4

	0	1
0	2862	5017
1	1344	6535

Logistic Regression

	0	1
0	1930	5949
1	468	7411

Random Forest-

Accuracy of Random Forest < Accuracy of Logistic Regression

~~Accuracy~~ of Precision for Random Forest < Precision for Logistic Regression

Recall for Random Forest > Recall for Logistic regression

F1 score for Random Forest > F1 score for Logistic regression

Date: / /
Page No.:

3) Threshold = 0.6

	0	1
0	6858	1021
1	5473	2406

Logistic regression

	0	1
0	6858	1
1		

	0	1
0	7417	462
1	3640	2239

Accuracy for random - Forest > Accuracy for logistic regression.

Precision random - Forest > Precision logistic regression

recall for random - Forest < recall for logistic regression

Date: / /
Page No.:

Influence

i) As we increase the threshold, TRR decreases, FNR increase, TNR increases and FPR decreases.

ii) As we decrease the threshold, TPR ~~decreases~~ increases, FNR decreases, TNR decreases, FPR increases.

iii) For thresholds lower than 0.5, logistic regression has more accuracy than Random Forest

vi) For higher thresholds, Recall for logistic regression is higher than recall for Random Forest.

v) Comparing both the models, Random forest will be a better model as it has high accuracy, precision and Recall at threshold 0.5.

vi) Looking at the ROC curve (in the collab notebook) we can say that Random forest is more fit for this model.