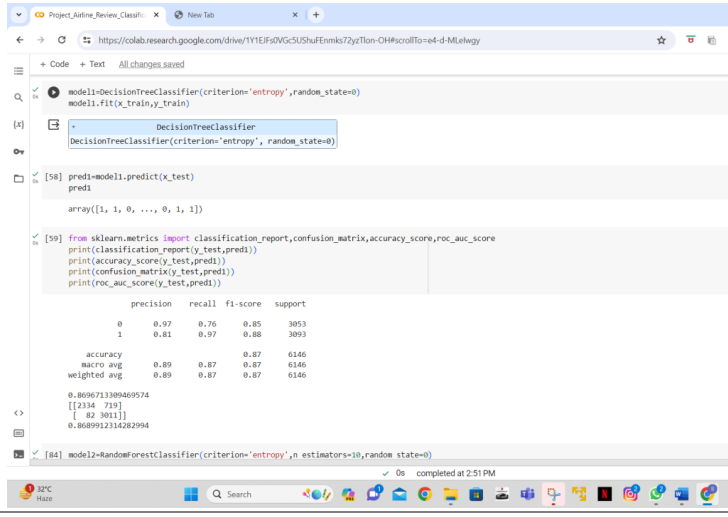
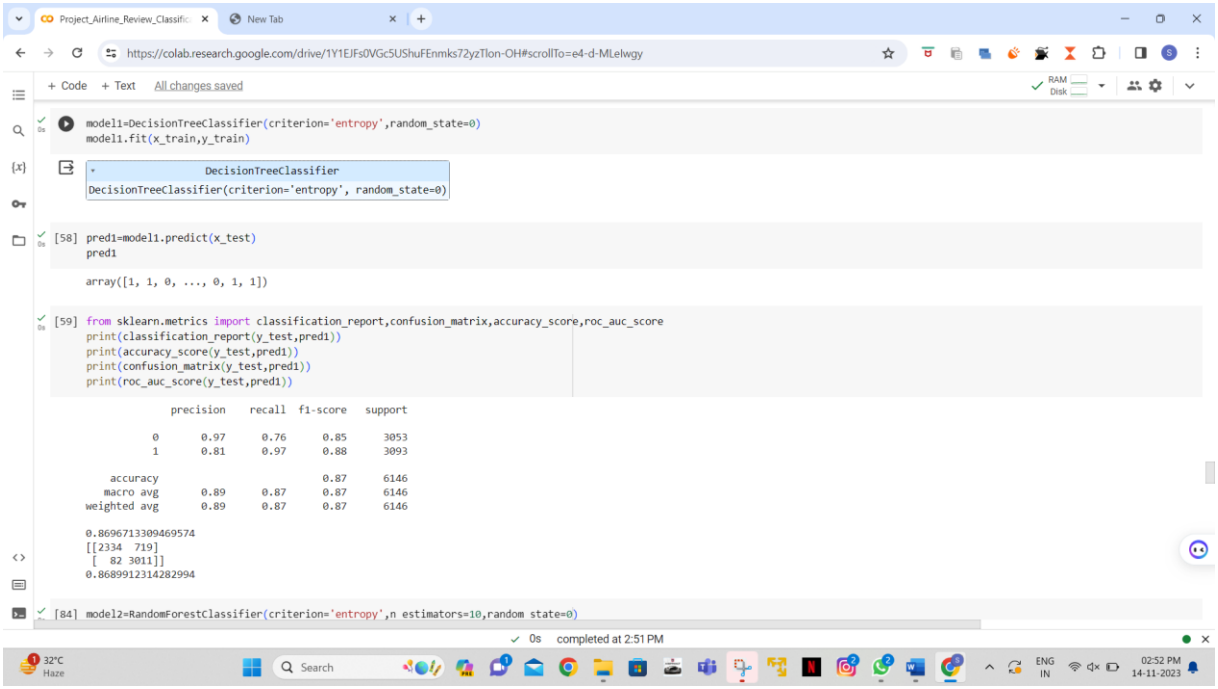
Project Development Phase
Model Performance Test

Date	14 November 2023
Team ID	Team-592860
Project Name	Airline Review ClassificaLon Using ML
Maximum Marks	10 Marks

Model Performance Tes6ng:

S.No.	Parameter	Values	Screenshot
1	Metrics	**Classification Model (KNN):** Confusion Matrix - 0.8807354376830459 [[2652 401] [332 2761]] 0.8806573151190695	
2	Tune the Model	Hyperparameter Tuning - Default Validation Method - Default	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model1=DecisionTreeClassifier(criterion='entropy',random_state=0)
model1.fit(x_train,y_train)
DecisionTreeClassifier
DecisionTreeClassifier(criterion='entropy', random_state=0)
[58] pred1=model1.predict(x_test)
pred1
array([1, 1, 0, ..., 0, 1, 1])
[59] from sklearn.metrics import classification_report,confusion_matrix,accuracy_score,roc_auc_score
print(classification_report(y_test,pred1))
print(accuracy_score(y_test,pred1))
print(confusion_matrix(y_test,pred1))
print(roc_auc_score(y_test,pred1))
precision recall f1-score support
0 0.97 0.76 0.85 3053
1 0.81 0.97 0.88 3093
accuracy 0.87 6146
macro avg 0.89 0.87 0.87 6146
weighted avg 0.89 0.87 0.87 6146
0.8696713309469574
[[2334 719]
[82 3011]]
0.8689912314282994
[84] model2=RandomForestClassifier(criterion='entropy',n estimators=10,random state=0)
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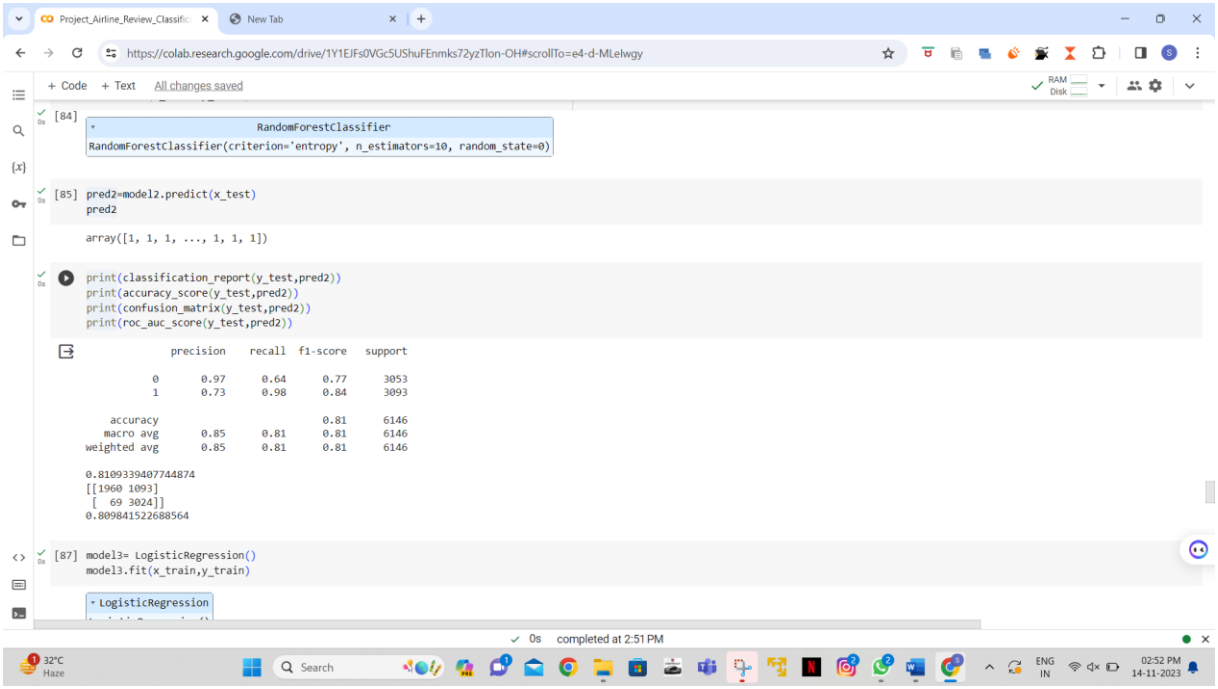
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RAM
Disk
[84]
RandomForestClassifier
RandomForestClassifier(criterion='entropy', n_estimators=10, random_state=0)
[85] pred2=model2.predict(x_test)
pred2
array([1, 1, 1, ..., 1, 1, 1])
print(classification_report(y_test,pred2))
print(accuracy_score(y_test,pred2))
print(confusion_matrix(y_test,pred2))
print(roc_auc_score(y_test,pred2))
precision recall f1-score support
0 0.97 0.64 0.77 3053
1 0.73 0.98 0.84 3093
accuracy 0.81 6146
macro avg 0.85 0.81 0.81 6146
weighted avg 0.85 0.81 0.81 6146
0.8109339407744874
[[1960 1093]
[69 3024]]
0.809841522688564
[87] model3= LogisticRegression()
model3.fit(x_train,y_train)
LogisticRegression
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14-11-2023