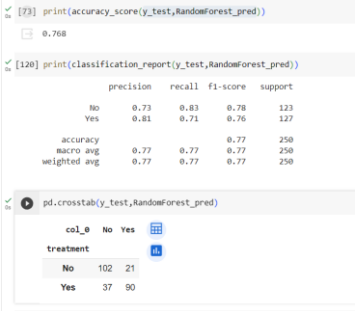



## Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	Team-591803
Project Name	Project – Mental health prediction using machine learning
Maximum Marks	10 Marks

### Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Metrics	<b>Regression Model:</b> MAE - , MSE - , RMSE - , R2 score -  <b>Classification Model:</b> Confusion Matrix - , Accuray Score- & Classification Report -	 <pre> [73] print(accuracy_score(y_test,Randomforest_pred)) 0.768  [120] print(classification_report(y_test,Randomforest_pred))        precision    recall  f1-score   support     No       0.73       0.83       0.78       123    Yes       0.81       0.71       0.76       127   accuracy          0.77  macro avg         0.77  weighted avg      0.77 </pre> <pre> pd.crosstab(y_test,Randomforest_pred)  col_0  No  Yes treatment No      102  21 Yes      37  90 </pre>
2.	Tune the Model	Hyperparameter Tuning - Validation Method -	 <pre> rfc_random.fit(x_train,y_train)  from sklearn.model_selection import GridSearchCV estimator = RandomForestClassifier() grid_search = GridSearchCV(estimator=estimator, param_grid=param_grid, cv=5)  [77] y_pred_rfc=rfc_random.predict(x_test)  [78] print(accuracy_score(y_test,y_pred_rfc)) 0.768  [79] abc_tuned = AdaBoostClassifier(random_state=0, n_estimators=11, learning_rate=1.0) abc_tuned.fit(x_train, y_train) pred_abc_tuned = abc_tuned.predict(x_test) accuracy = accuracy_score(y_test, pred_abc_tuned) print('accuracy of Adaboost (tuned) =', accuracy)  Accuracy of Adaboost (tuned) = 0.764 </pre>