Project Development Phase
Model Performance Test

Date	8 November 2023-
Team ID	592309
Project Name	Mental Health Prediction Using ML
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.	Model Summary	From the above results, it is clear that AdaBoost Classifier provides the best accuracy.	`def model_test(X_train, X_test, y_train, y_test,model,model_name):`
			`  model.fit(X_train,y_train)`
			`  y_pred = model.predict(X_test)`
			`  accuracy = accuracy_score(y_test,y_pred)`
			`  print('==========...{}==========...'.format(model_name))`
			`  print('Score is : {}'.format(accuracy))`
			`  print()`
			
			`for model_name,model in model_dict.items():`
			`  model_test(X_train, X_test, y_train, y_test, model, model_name)`
			
			==========Logistic regression==========
			Score is : 0.848
			
			==========KNN Classifier==========
			Score is : 0.7813333333333333
			
			==========Decision Tree Classifier==========
			Score is : 0.7946666666666666
			
			==========Random Forest Classifier==========
			Score is : 0.8533333333333334
			
			==========AdaBoost Classifier==========
			Score is : 0.864
			
			==========Gradient Boosting Classifier==========
			Score is : 0.84
			
			==========XGB Classifier==========
			Score is : 0.8106666666666666

2.	Accuracy	Training Accuracy – 0.864
		
		Validation Accuracy - 0.864
			`abc = AdaBoostClassifier(random_state=99)`
			`abc.fit(X_train,y_train)`
			`pred_abc = abc.predict(X_test)`
			`print('Accuracy of AdaBoost=',accuracy_score(y_test,pred_abc))`
			
			Accuracy of AdaBoost= 0.864

3.	Confidence Score (Only Yolo Projects)	Class Detected Confidence Score	`print(classification_report(y_test,pred_abc))` 		precision	recall	f1-score	support
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0	0.90	0.82	0.86	186
1	0.83	0.91	0.87	189
accuracy			0.86	375
macro avg	0.87	0.86	0.86	375
weighted avg	0.87	0.86	0.86	375 | `print(classification_report(y_test,pred_abc_tuned))` |	precision	recall	f1-score	support
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0	0.96	0.72	0.82	195
1	0.76	0.97	0.85	180
accuracy			0.84	375
macro avg	0.86	0.84	0.84	375
weighted avg	0.87	0.84	0.84	375