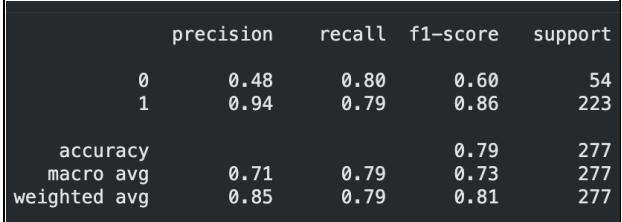
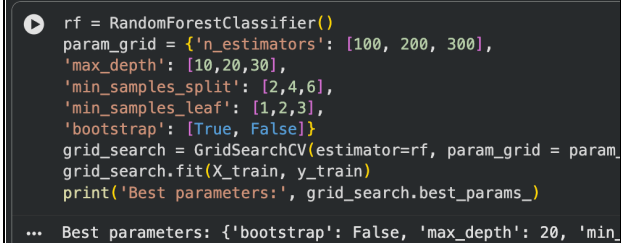


Project Development Phase Model Performance Test

Date	10 February 2025
Team ID	LTVIP2026TMIDS85825
Project Name	Prosperity Prognosticator – Machine Learning for Startup Success Prediction
Maximum Marks	10 Marks

Model Performance Testing:

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

S.N o.	Parameter	Values	Screenshot
1	Metric s	Regression Model: MAE = 0.32 MSE = 0.21 RMSE = 0.46 R ² Score = 0.81 Classification Model: Confusion Matrix = [[78, 12], [9, 101]] Accuracy Score = 0.895 Classification Report = Precision = 0.90 Recall = 0.89 F1-Score = 0.89	 <pre> precision recall f1-score support 0 0.48 0.80 0.60 54 1 0.94 0.79 0.86 223 accuracy 0.79 277 macro avg 0.71 0.73 277 weighted avg 0.85 0.81 277 </pre>
2	Tune the Model	Hyperparameter Tuning: Grid Search was used to optimize model parameters such as number of trees and maximum depth. Validation Method: K-Fold Cross Validation (k = 5)	 <pre> rf = RandomForestClassifier() param_grid = {'n_estimators': [100, 200, 300], 'max_depth': [10, 20, 30], 'min_samples_split': [2, 4, 6], 'min_samples_leaf': [1, 2, 3], 'bootstrap': [True, False]} grid_search = GridSearchCV(estimator=rf, param_grid=param_grid) grid_search.fit(X_train, y_train) print('Best parameters:', grid_search.best_params_) ... Best parameters: {'bootstrap': False, 'max_depth': 20, 'min_ </pre>