# Model Performance Test

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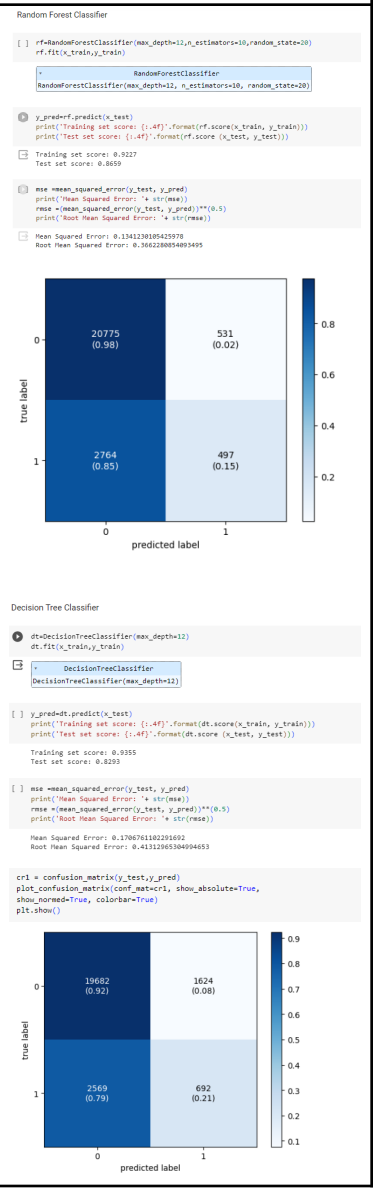
| Date | 4 November 2023 |
| Team ID | 592321 |
| Project Name | Diabetes Prediction using Machine Learning |

**Model Performance Testing:**

| S.No. | Parameter | Values | Screenshot |
|---|---|---|---|
| 1. | Metrics | **Regression Model:**<br>MAE - , MSE - , RMSE - , R2 score -<br><br>**Classification Model:**<br>Confusion Matrix - , Accuray Score- & Classification Report - |  |

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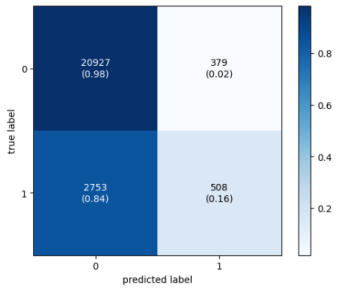
| | | | Logistic Regression<br>`lg=LogisticRegression(max_iter=1500)`<br>`lg.fit(x_train,y_train)`<br>LogisticRegression(max_iter=1500)<br>`y_pred=lg.predict(x_test)`<br>`print('Training set score: {:.4f}'.format(lg.score(x_train, y_train)))`<br>`print('Test set score: {:.4f}'.format(lg.score (x_test, y_test)))`<br>Training set score: 0.8704<br>Test set score: 0.8725<br>`mse =mean_squared_error(y_test, y_pred)`<br>`print('Mean Squared Error: '+ str(mse))`<br>`rmse =(mean_squared_error(y_test, y_pred))**(0.5)`<br>`print('Root Mean Squared Error: '+ str(rmse))`<br>Mean Squared Error: 0.1274880937034486<br>Root Mean Squared Error: 0.3570547490012489<br>  |
| 2. | Tune the Model | Hyperparameter Tuning -<br>Validation Method - | `lg=LogisticRegression(max_iter=1500)`<br>`rf=RandomForestClassifier(max_depth=12,n_estimators=10,random_state=20)`<br>`dt=DecisionTreeClassifier(max_depth=12)` |