Project Development Phase
Model Performance Test

Date	20 NOvember 2022
Team ID	591645
Project Name	Diabetes 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	**Regression Model:**
		MAE - 0.1725 , MSE - 0.1725 , RMSE - 0.4153311931459037,
		 R2 score - 0.2072610294117646
		
		Classification Model:
		Confusion Matrix - [[239 33]
		 [36 92]],
		Accuray Score- & Classification Report - 0.8275
		  precision recall f1-score support
		
		    0 0.87 0.88 0.87 272
		    1 0.74 0.72 0.73 128
		
		  accuracy 0.83 400
		  macro avg 0.80 0.80 0.80 400
		weighted avg 0.83 0.83 0.83 400

| 2. | Tune the Model | Hyperparameter Tuning - Validation Method - | Classification Model Metrics (SVM):
Confusion Matrix (SVM):
[[252 20]
 [56 72]]
Accuracy Score (SVM): 0.81
Classification Report (SVM):
<pre>   precision   recall f1-score   support

       0   0.82   0.93   0.87   272
       1   0.78   0.56   0.65   128

accuracy   0.81   400
macro avg   0.80   0.74   0.76   400
weighted avg   0.81   0.81   0.80   400</pre>

Classification Model Metrics (Naive Bayes):
Confusion Matrix (Naive Bayes):
[[242 30]
 [63 65]]
Accuracy Score (Naive Bayes): 0.7675
Classification Report (Naive Bayes):
<pre>   precision   recall f1-score   support

       0   0.79   0.89   0.84   272
       1   0.68   0.51   0.58   128

accuracy   0.77   400
macro avg   0.74   0.70   0.71   400
weighted avg   0.76   0.77   0.76   400</pre> |