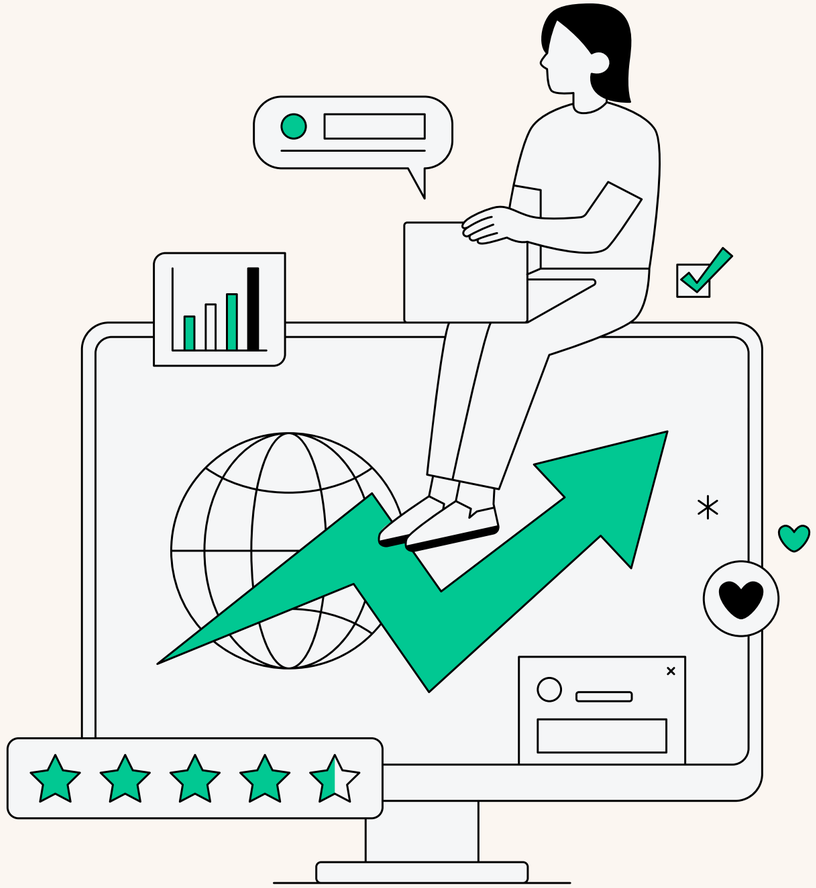
Diagnose Type 2 Diabetes

XGBoost, CatBoost

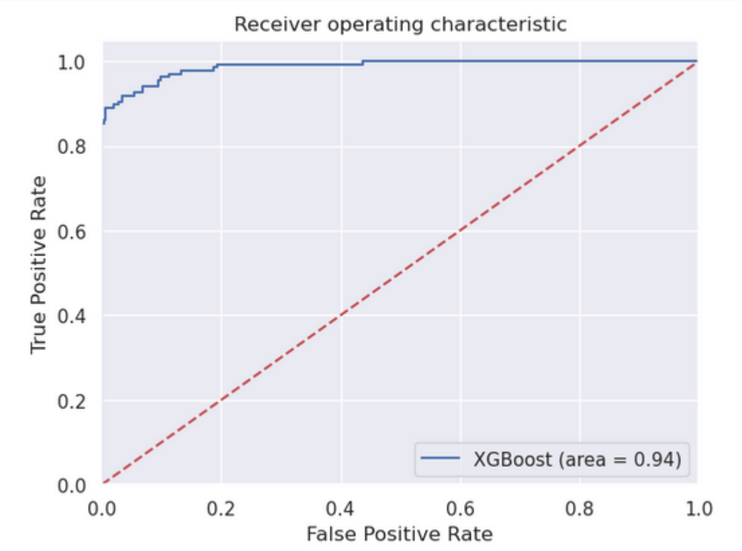


Presented by P_MLSpecialist

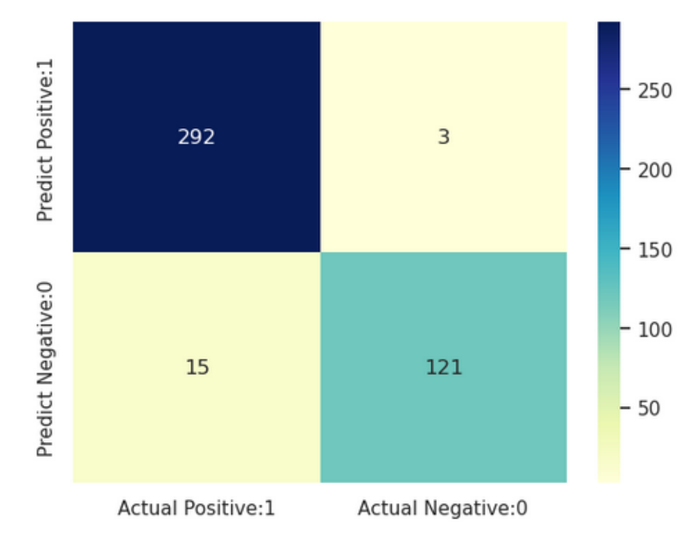
Diabetes Diagnosis Model

Diabetes is a chronic disease that affects millions of people worldwide and can lead to serious health complications if left untreated. Early diagnosis and prediction of diabetes can help patients receive timely treatment and prevent the onset of complications. On the other hand, XGBoost and CatBoost are powerful machine-learning models that can be used to predict diabetes based on patient data. By providing accurate predictions, these models can help healthcare professionals make informed decisions and improve patient outcomes. Once the model is trained and validated, it can be used to predict the diabetes status of new patients based on their medical data. This can be a valuable tool for healthcare professionals to identify patients who are at risk of developing diabetes and provide them with timely interventions to prevent or manage the disease!

Validation of XGBoost Model



Receiver Operating Characteristic

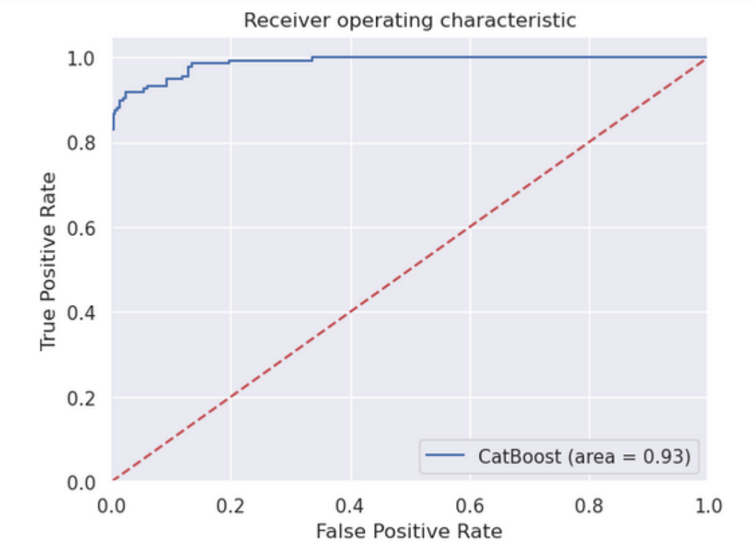


Confusion Matrix

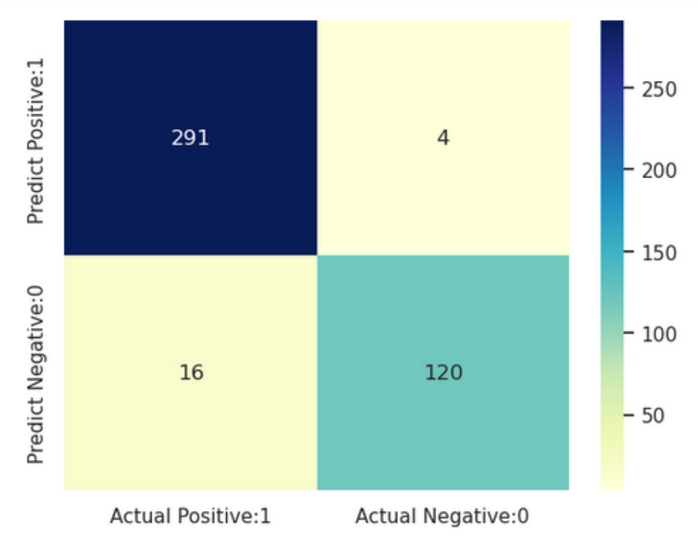
Metric	Score
ACC	0.96
F1 Score	0.93
Sensitivity	0.98
Specificity	0.88

Scores of Metrics Evaluation Model

Validation of CatBoost Model



Receiver Operating Characteristic



Confusion Matrix

Metric	Score
ACC	0.95
F1 Score	0.92
Sensitivity	0.98
Specificity	0.88

Scores of Metrics Evaluation Model

93%

F1_Score

Finally, the Diabetes Diagnosis Model that we trained with F1_Score %0.93 and Accuracy of %0.96 can diagnose type 2 diabetes by combining lifestyle information and individual test results, we can gain a better understanding of an individual's health.

Thank you very much!

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