

Diabetes Prediction

Aljowhara Alblaihd | Project Link: <https://github.com/AljowharaAlblaihd/Diabetes-Prediction-Data-Science-Project>

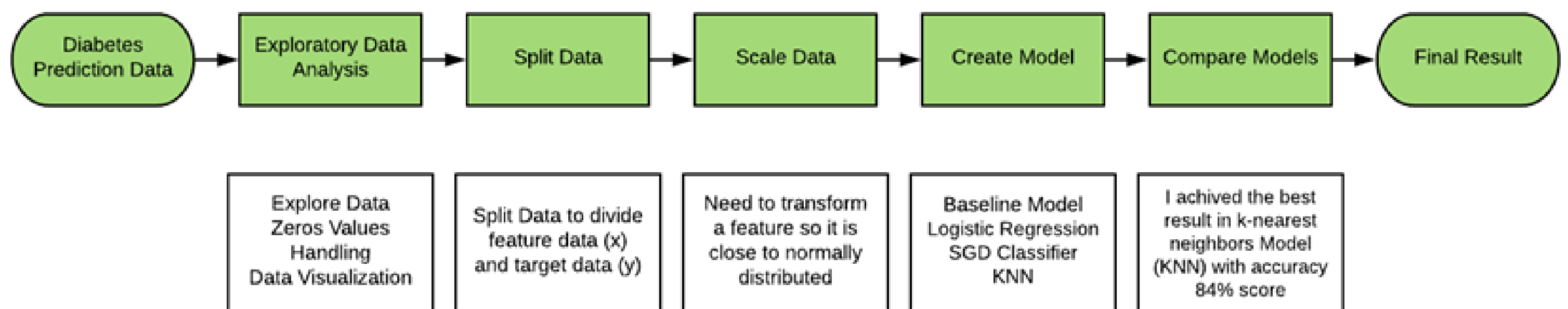
Summary

Diabetes is a chronic (long-lasting) health condition that affects how your body turns food into energy. Most of the food you eat is broken down into sugar (also called glucose) and released into your bloodstream. When your blood sugar goes up, it signals your pancreas to release insulin. Insulin acts like a key to let the blood sugar into your body's cells for use as energy. If you have diabetes, your body either doesn't make enough insulin or can't use the insulin it makes as well as it should. When there isn't enough insulin or cells stop responding to insulin, too much blood sugar stays in your bloodstream. Over time, that can cause serious health problems, such as heart disease, vision loss, and kidney disease.

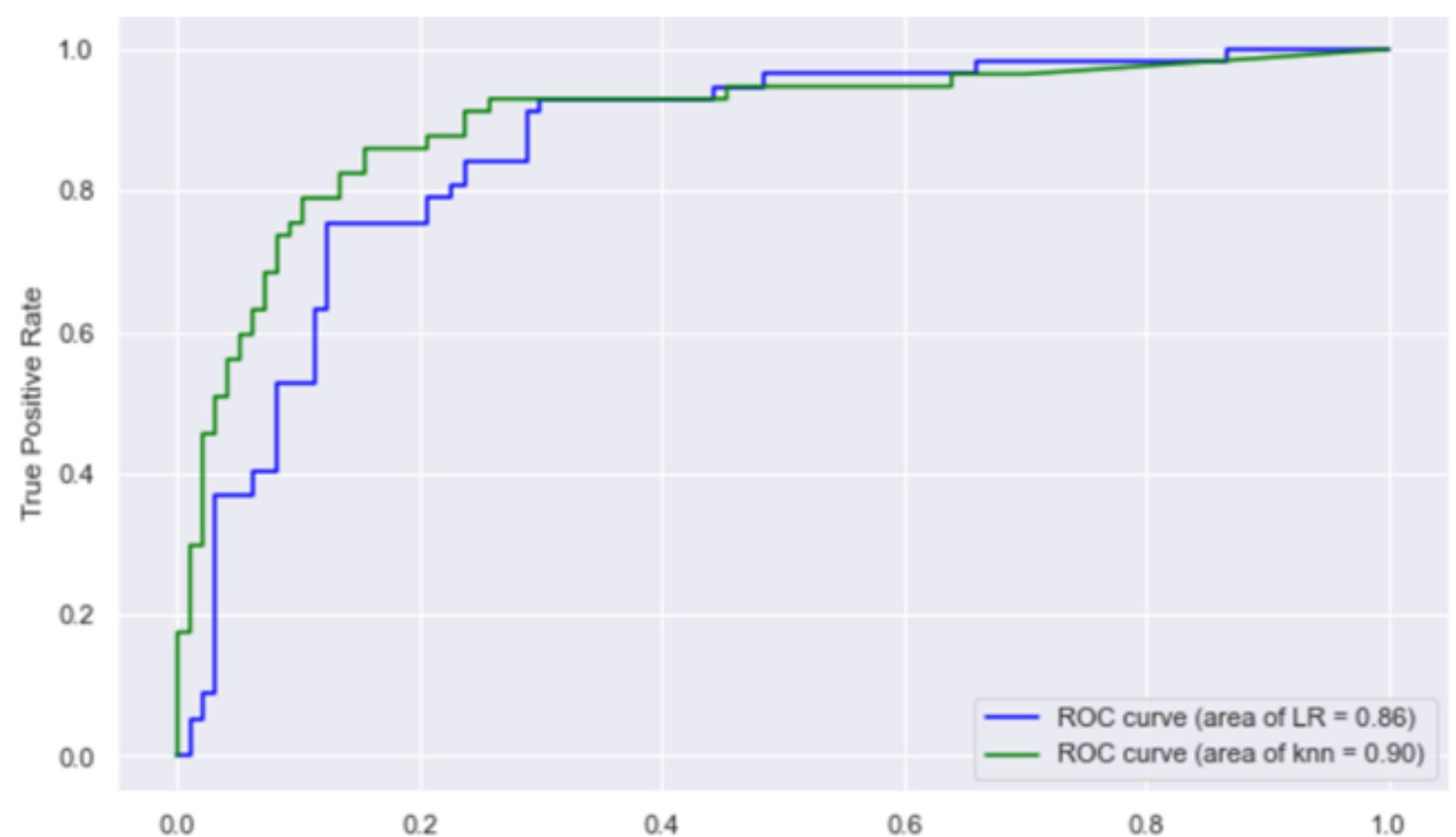
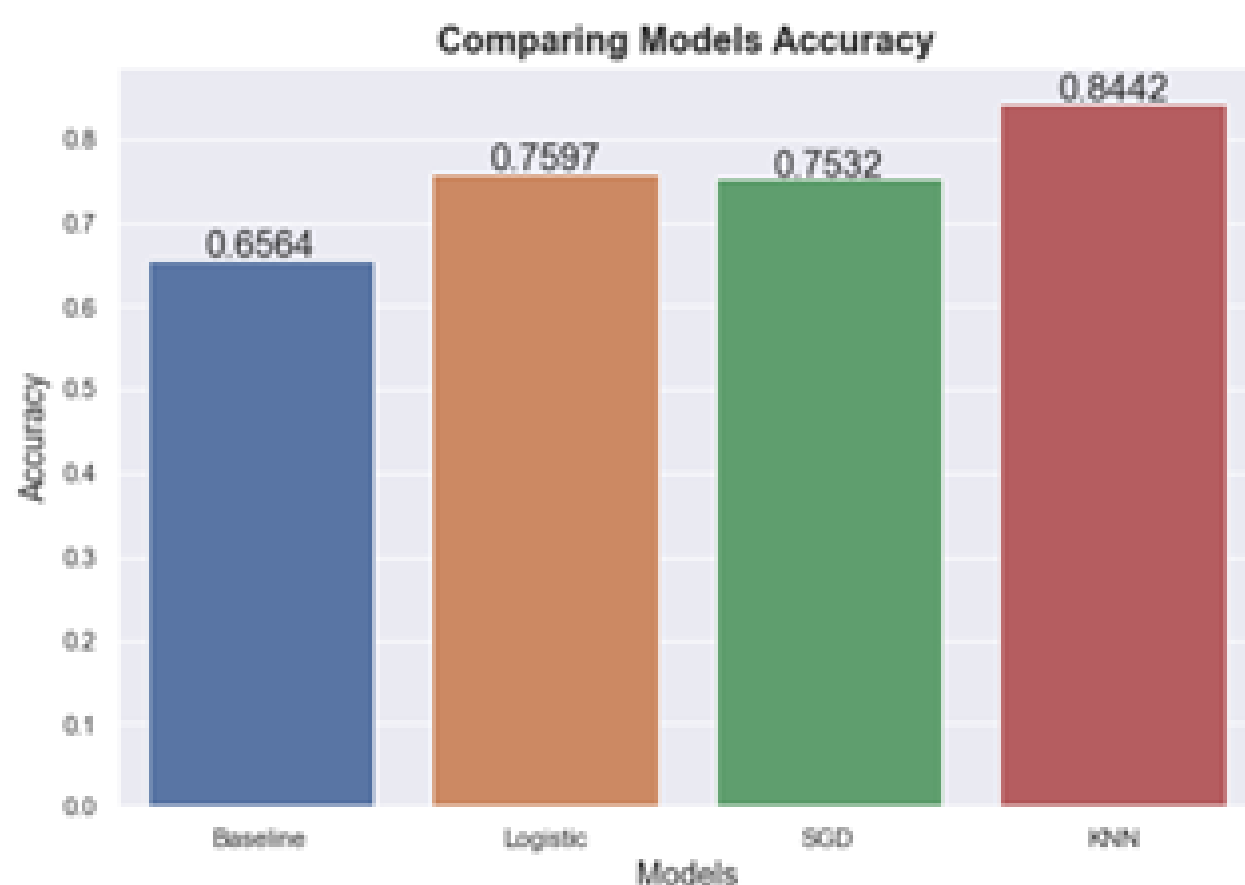
Business Problem

Project objective is to predict whether the patient has diabetes or not based on various features includes Number of times pregnant, Glucose, Blood Pressure, skin Thickness, Insulin, BMI, Family history of diabetes and Age.

Process



Model Results



Results

- I achieved the best result in k-nearest neighbors Model with ROC AUC 90% and accuracy 84% score.
- Baseline accuracy 65.6% score.
- High correlation between Outcome are Glucose, BMI and Age.

Next Steps

- 1- Add more features for more accuracy result, the features are Sex and Type of diabetes
- 2- Make a website/app for help diabetics to knowledge all information about diabetes, can communication with doctors any time and this web/app have all data about diabetics.

Tools