Machine learning algorithm for disease detection & prediction

By : Sharmishtha Shukla

Univ roll no: 2017668

Mentor : Sharon Crista (Associate Professor)

Introduction

- Disease Prediction model is a piece of software that predicts the disease based on the symptoms provided by the user or any patient. The model processes the symptoms as an input and produces an output as the probability of the disease
- A disease predictor is a virtual doctor

Problem Statement

- Machine Learning Algorithm for disease detection and prediction : Here a multiple disease detection and prediction model is designed with average accuracy of 95 %.

Methodology

Disease Detection:

Detection of : Heart, Diabetes, Parkinson

Dataset Used : Cleveland Heart Disease Dataset, Diabetese Dataset from Kaggle, Parkinson Disease Dataset from Kaggle

Classifier Used : Random Forest, Linear Regression , SVM

Medthodology

Disease Prediction

Prediction of : 42 Disease

Symptoms : 139

Dataset Used : Kaggle Disease Prediction Symptom

Classifier Used : Random Forest

Libraries Used :

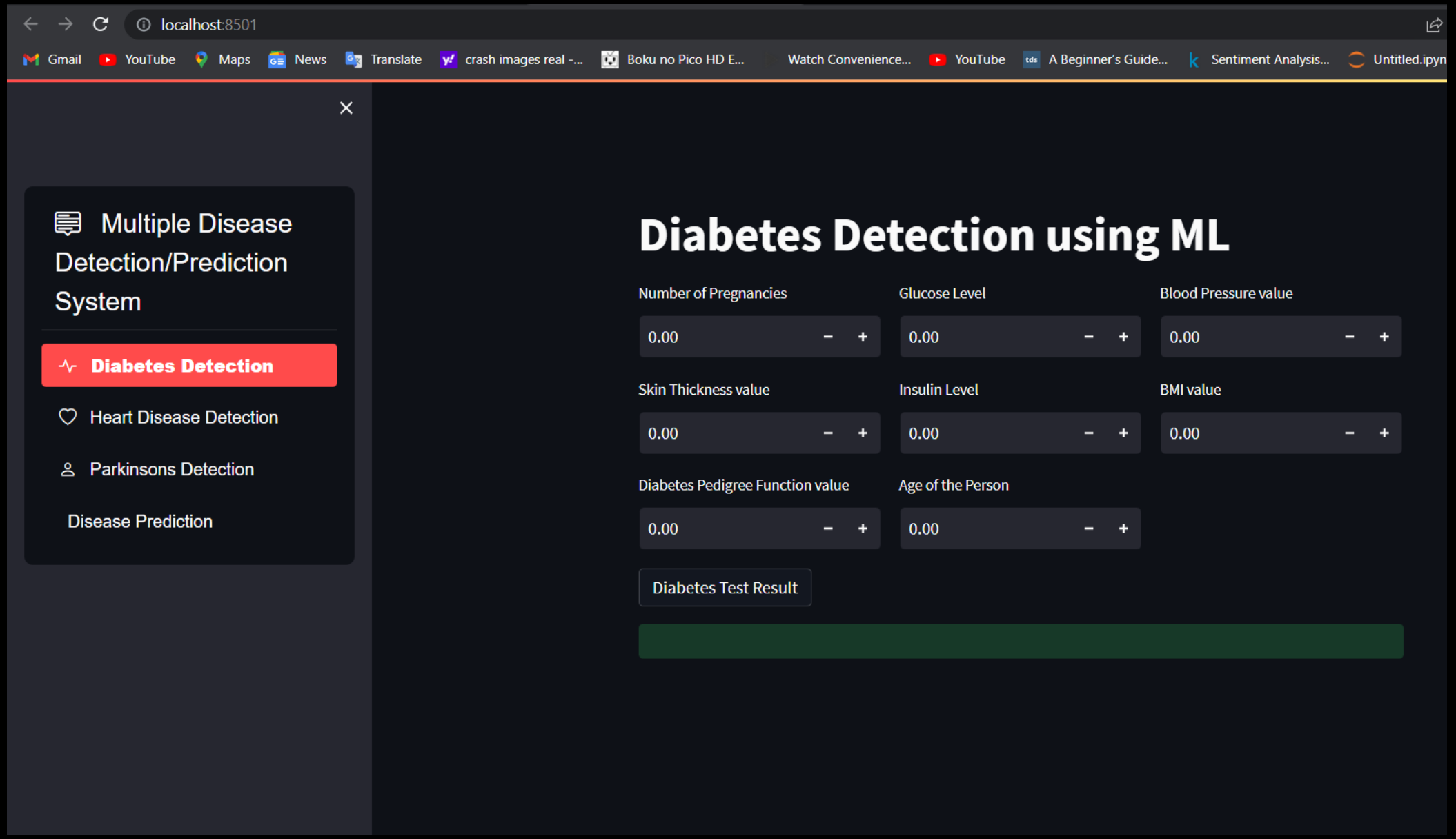
Numpy	Pandas	Seaborn
Matplotlib	Streamlit	Sklearn

Result :

The average accuracy is 95% for all detection and prediction

The highest accuracy on the training set is 100%, which is achieved with random forest.

Our predictive system can help and be used in diagnosing diseases.


localhost:8501
Gmail
YouTube
Maps
News
Translate
crash images real -...
Boku no Pico HD E...
Watch Convenience...
YouTube
A Beginner's Guide...
Sentiment Analysis...
Untitled.ipyn
Multiple Disease Detection/Prediction System
Diabetes Detection
Heart Disease Detection
Parkinsons Detection
Disease Prediction
Diabetes Detection using ML
Number of Pregnancies
Glucose Level
Blood Pressure value
Skin Thickness value
Insulin Level
BMI value
Diabetes Pedigree Function value
Age of the Person
0.00
Diabetes Test Result

Conclusion and Future Work

- Because some models were parameter dependent, they failed to predict disease and had a very low percentage of accuracy. Once disease is predicted, medical resources needed for treatment can be easily managed. This model helps us to reduce the cost of treating the diseases and improves the recovery process.