

Hospital Readmission Prediction

Objective

Method

Models

The prime objective of this project is to predict whether a person who has been diagnosed with diabetes will be readmitted to the hospital within 30 days or not.

This will help the hospitals in being ready for any number of patients that could be readmitted.



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The problem associated is binary classification. Since the target variable in the dataset is quite imbalanced, SMOTE algorithm was used to oversample the minority class.





Objective

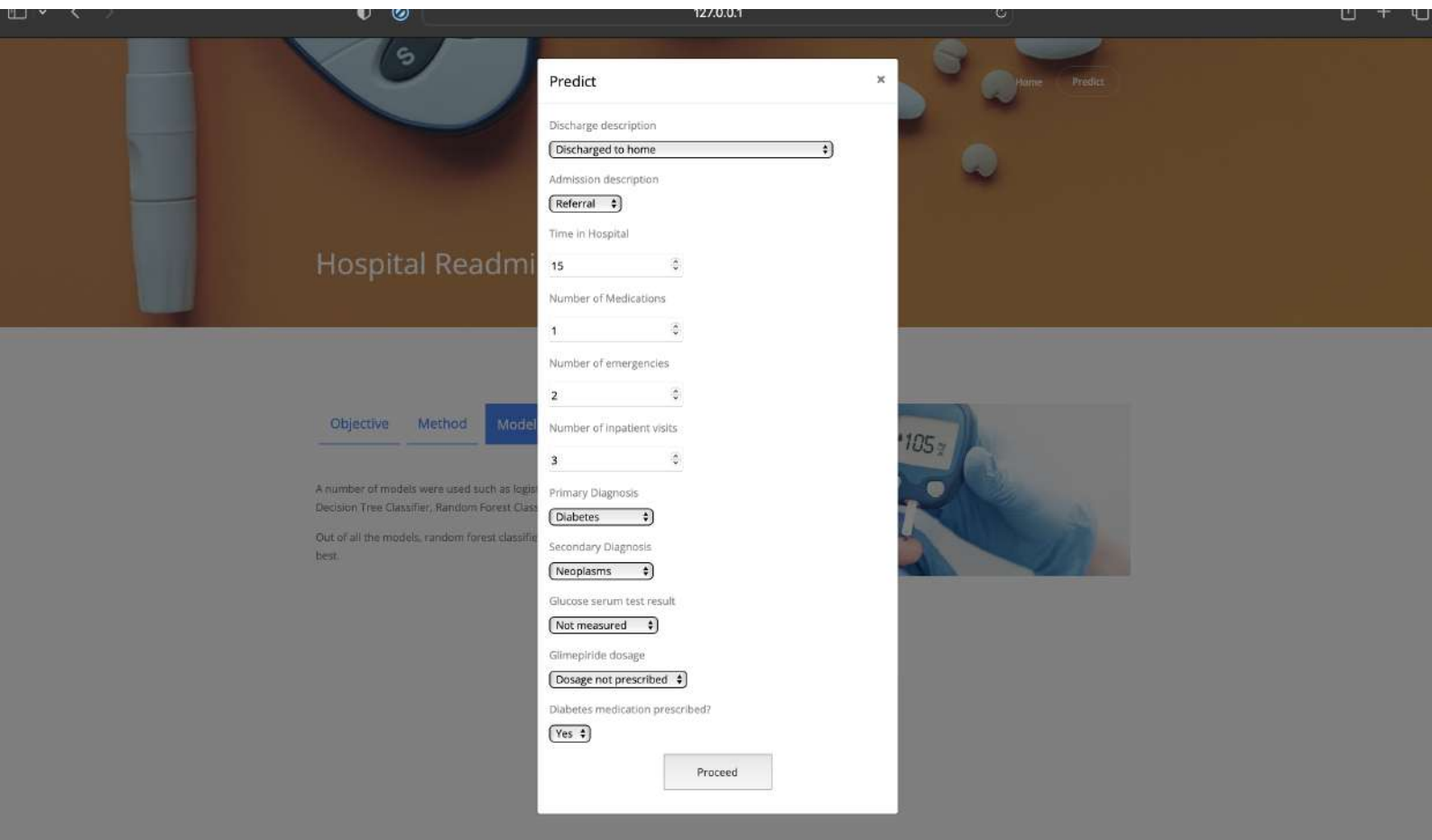
Method

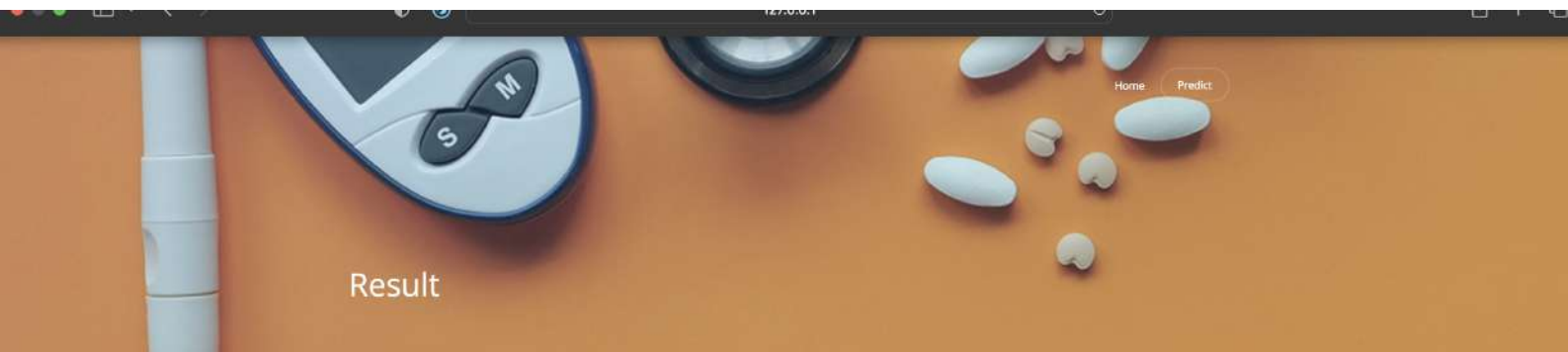
Models

A number of models were used such as logistic regression, KNN Classifier, Decision Tree Classifier, Random Forest Classifier, Adaboost Classifier etc.

Out of all the models, random forest classifier is found to perform the best.

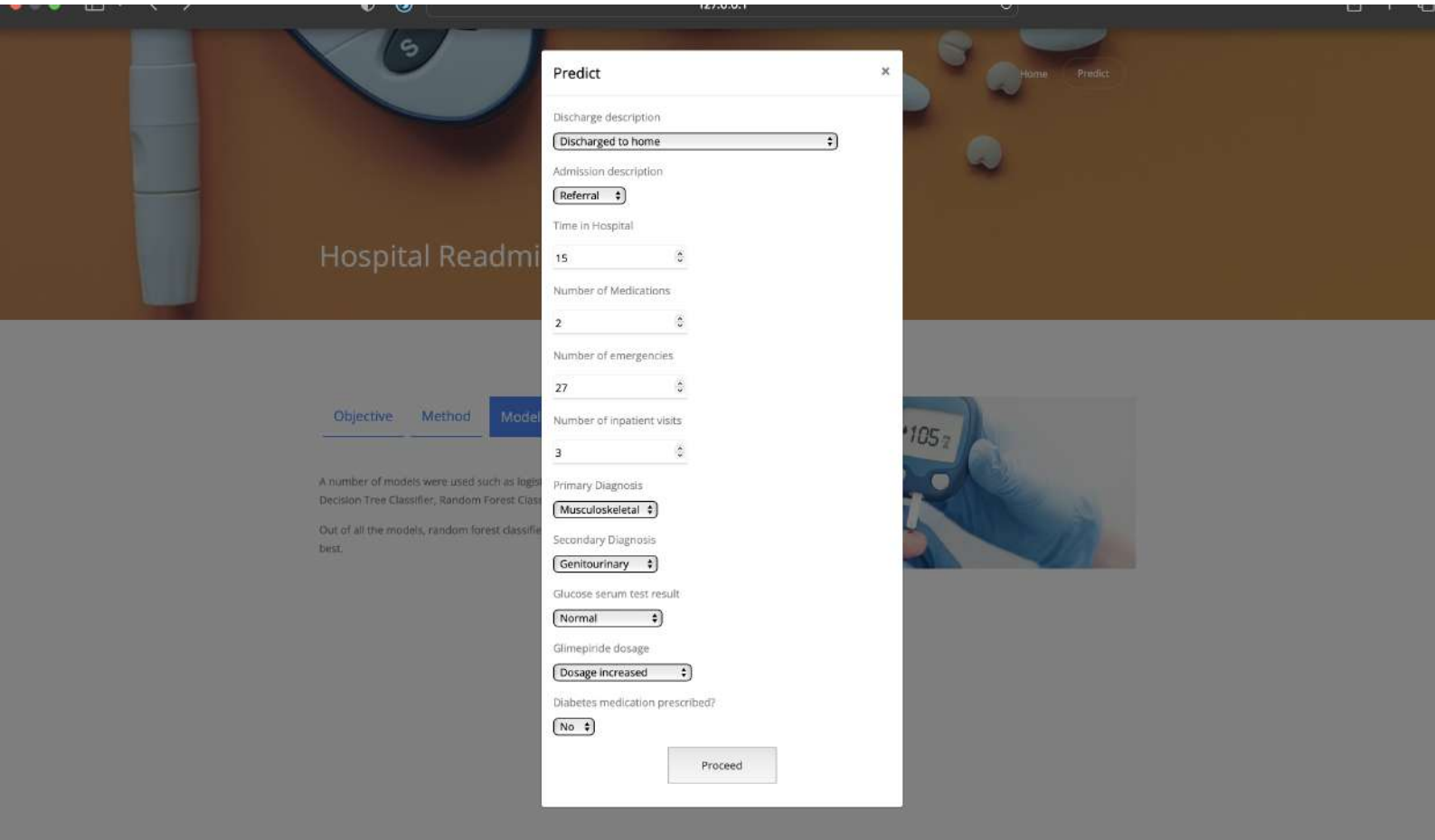






Result

This patient will be readmitted



Predict

Discharge description

Discharged to home

Admission description

Referral

Time in Hospital

15

Number of Medications

2

Number of emergencies

27

Number of inpatient visits

3

Primary Diagnosis

Musculoskeletal

Secondary Diagnosis

Genitourinary

Glucose serum test result

Normal

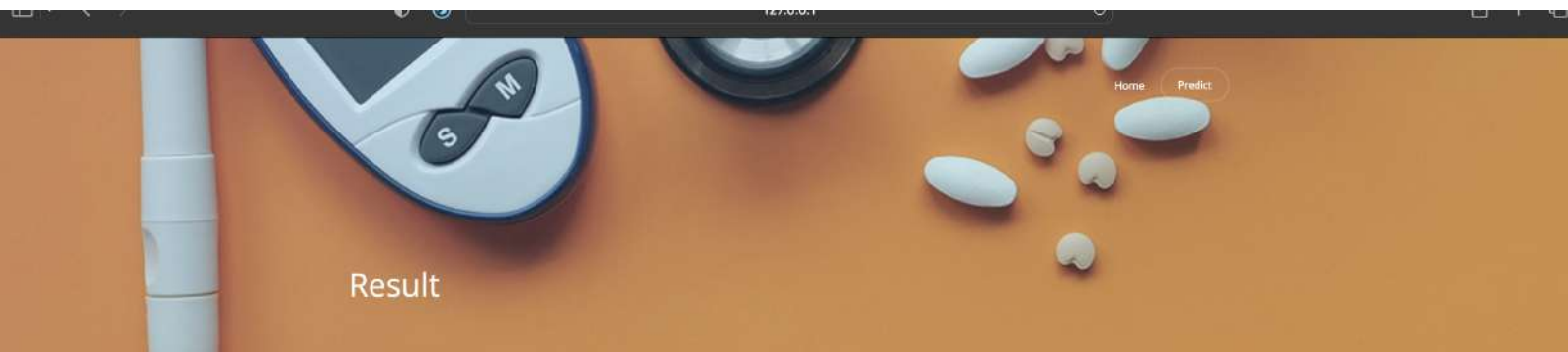
Glimepiride dosage

Dosage increased

Diabetes medication prescribed?

No

Proceed



This patient will not be readmitted