ABSTRACT

Diabetes Prediction:

Diabetes is a chronic disease with the potential to cause a worldwide health care crisis.

According to International Diabetes Federation 382 million people are living with diabetes

across the whole world. By 2035, this will be doubled as 592 million. Diabetes mellitus or

imply diabetes is a disease caused due to the increase level of blood glucose. Various

traditional methods, based on physical and chemical tests, are available for diagnosing

diabetes. However, early prediction of diabetes is quite challenging task for medical

practitioners due to complex interdependence on various factors as diabetes affects human

organs such as kidney, eye, heart, nerves, foot etc. Data science methods have the potential to

benefit other scientific fields by shedding new light on common questions. One such task is

to help make predictions on medical data. Machine learning is an emerging scientific field in

data science dealing with the ways in which machines learn from experience. The aim of this

project is to develop a system which can perform early prediction of diabetes for a patient

with a higher accuracy by combining the results of different machine learning techniques.

This project aims to predict diabetes via three different supervised machine learning methods

including: SVM, Logistic regression, KNN. This project also aims to propose an effective

technique for earlier detection of the diabetes disease using Machine learning algorithms and

end to end deployment using flask.

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Data Set

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The dataset collected is originally from the Pima Indians Diabetes Database is

available on Kaggle. It consists of several medical analyst variables and one target variable.

The objective of the dataset is to predict whether the patient has diabetes or not. The dataset

consists of several independent variables and one dependent variable, i.e., the outcome.

Independent variables include the number of pregnancies the patient has had their BMI,

insulin level, age, and so on as Shown in Following Table 1:

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Tools and Algorithms:

Machine Learning Algorithms:

Logistic Regression

SVM

KNN

Decision Tree

Random Forest

We build this project using the Flask.

