DIABETES RISK PREDICTION

INTRODUCTION

Diabetes Mellitus is among critical diseases and lots of people are suffering from the disease (A. Mujumdar and V Vaidehi (2020)). It affects people of all ages. Cleveland Clinic states in a blog post that it is a condition that happens when the blood sugar is too high and that it develops when the pancreas doesn’t make enough insulin (an essential hormone that helps the body turn food into energy and manages the blood sugar levels) or any at all, or when the body isn’t responding to the effects of insulin properly. Main causes include Age, Obesity, lack of exercise, hereditary diabetes, lifestyle, bad diet, high blood pressure, etc. and people having this disease have high risks of heart disease, kidney disease, stroke, eye problem, nerve damage and much more

There are different types of Diabetes Mellitus. They include

* Type 1 diabetes also called Juvenile diabetes, usually diagnosed in children and young adults, occurs when the immune system itself attacks and destroys insulin-producing cells in the pancreas for unknown reasons (Cleveland) making the body unable to produce insulin. There is no cure but it can be managed with a regular administration of insulin with injections or insulin pump (medicalnews today).
* Type 2 diabetes, the most common type of diabetes, where the body doesn’t produce or respond to insulin, as it should. It has a strong link with obesity (medical news today) and it usually affects adults, but children can have it well.
* Gestational diabetes occurs during pregnancy when a person becomes less sensitive to insulin. Obese women going into pregnancy have a higher risk of developing this condition (medical news today). It usually goes away after pregnancy but people who have it are at a higher risk of developing type 2 diabetes later in life.
* Prediabetes or borderline diabetes, normally a stage before Type 2 diabetes, occurs when a person’s blood sugar level is higher than normal but not enough for an official diagnosis of diabetes.

Other types include Type 3c (caused by pancreas damage or pancreatectomy), Monogenic (caused by a single gene change in neonates and young ones), Brittle and Cystic fibrosis-related diabetes.

Deliverables

* Report
* Documentation
* Descriptive Analysis Dashboard
* Machine learning model