**Group No. 02**

**Mini Project Title:** Machine learning based classification and prediction for early screening of gestational diabetes.

**Problem Statement:** Design and develop a machine learning model, to predict whether a woman is gestational diabetic or not, based on the data of patient Age, BMI, blood pressure, Insulin level and Pregnancy history.

**Abstract:** Gestational diabetes is a type of diabetes that develops during pregnancy in women who didn't have diabetes before they were pregnant can typically develops in the middle of pregnancy, between 24 and 28 weeks. Most women with gestational diabetes don't have any symptoms. It significantly increases mother’s risk of developing type 2 diabetes later in life. Gestational diabetes can lead to larger babies, early delivery, low blood sugar in newborns, and an increased risk of type 2 diabetes for both mom and baby later in life. The goal of this work is to more accurately predict gestational diabetes in the early stages by utilizing different machine learning methods. The data set that has been used in this project is taken from the kaggle containing 768 record which is passed through the different preprocessing steps which is further used to train our support vector model. Later it under goes to model evaluation to find model accuracy.By building models from patient datasets, machine learning algorithms yield superior results when it comes to diabetes detection. For this project we have used Support Vector Machine and Logistic Regression. To test the model, inputs were taken from case study available on National Library of Medicine. In this case, the 31-year woman was suffering from gestational diabetes. According to the article we took the inputs like BP, BMI, insulin level and pregnancy history. The inputs used in model correctly predicted that she will suffer from gestational diabetes.

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