MACHINE LEARNING AND DEEP LEARNING APPLICATION FOR DIABETES PREDICTION

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Diabetes is common disease in this world, the aim of our study is to predict this disease by using Machine learning and Deep learning algorithms.

Machine learning (ML) has become a tool used in many areas of our lives, including healthcare. Machine learning applications are becoming more and more widely used in healthcare, especially in the case of early detection of disease.

Diabetes is one of the most common diseases around the world, and with the help of machine learning algorithms, we have the ability to predict diabetes early in patients.

Electronic medical records allow us to obtain patient information more quickly and efficiently, and machine learning allows us to predict disease early and allows patients to take precautionary measures to prevent complications that may occur from infection with a particular disease.

In our study, we use a database is originally from the National Institute of Diabetes and Digestive and Kidney Diseases. All patients here are females at least 21 years old.

The datasets consists of several medical parameters and one target variable, Result. Predictor variables includes the number of pregnancies the patient has had, their Body mass index, insulin level, age, etc.

The study included 4 different types of models:

1. Logistic Regression.
2. Random Forest.
3. Support Vector Machines.
4. Convolutional Neural Networks.

1. Rajiv Singla, Ankush Singla, Yashdeep Gupta, Sanjay Kalra. Indian Journal of Endocrinology and Metabolism 23(4) 497 (2019).