

Diabetics Prediction System Using Machine Learning

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Abstract: Diabetes is a serious disease that can strike at any time and affect many people. Age, obesity, sedentary lifestyle, poor diet, and high blood pressure are just a few of factors that contribute to the development of type 2 diabetes. There is the number of health problems that are more common in people with diabetes than usual population. Patients with diabetes are currently being diagnosed and treated using a variety of diagnostic methods, including blood testing, urine tests, and more. In the healthcare industry, big data analytics is essential. The healthcare industry has a tremendous amount of value data stored on a website. By using large amounts of data, users can gain understanding and practice predictions about the future by exploring big data sets and hidden disclosures knowledge and styles. The current method is not very good at classifying and forecasting. To better classify diabetes, we present a diabetes prediction model in this article that incorporates a few extrinsic parameters that cause diabetes, as well as regular components such as glucose, creatinine ratio, urea, fasting lipid profile, body mass index, age, insulin, and so on. Both datasets, each with eight variables, were subjected to the identical tests. The accuracy of a dataset with 12 variables is higher, so the conclusion is that the more information we have, the more accuracy we can attain.

Keywords: Diabetes, Machine Learning, Prediction, Dataset, etc.

REFERENCES

- [1] N. Sneha and T. Gangil "Analysis of diabetes mellitus for early prediction using optimal features selection" Journal of Big Data vol. 6 no. 1 2019.
- [2] Mujumdar and V. Vaidehi "Diabetes Prediction using Machine Learning Algorithms" Procedia Computer Science vol. 165 pp. 292-299 2019.
- [3] D. Sisodia and D. Sisodia "Prediction of Diabetes using Classification Algorithms" Procedia Computer Science vol. 132 pp. 1578-1585 2018.
- [4] B. Pranto S. Mehnaz E. Mahid I. Sadman A. Rahman and S. Momen "Evaluating Machine Learning Methods for Predicting Diabetes among Female Patients in Bangladesh" Information vol. 11 no. 8 pp. 374 2020.
- [5] P. Ghosh et al. Efficient Prediction of Cardiovascular Disease Using Machine Learning Algorithms with Relief and LASSO Feature Selection Techniques IEEE Access vol. 9 pp. 19304-19326 2021.