IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.301
Volume 3, Issue 8, April 2023

Diabetes Prediction using Machine Learning

Ms. P. V. Deshmukh[1], Ashwini Ghate[2], Prajakta Mathe[3], Aditi Dhote[4], Pratiksha Patte[5], Vrushali Mange[6]
Assistant Professor, Department of Computer Science and Engineering [1]
Under Graduate Students, Department of Computer Science and Engineering[2,3,4,5,6]
Shri Sant Gajanan Maharaj College of Engineering, Shegaon, India

Abstract: *High levels of glucose in the bloodstream lead to the development of diabetes , which results in frequent urination, increased thirst, and increased hunger. It is crucial to address diabetes promptly as untreated cases may lead to severe complications in various body organs such as the heart, kidneys, blood pressure, and eyes. Predictive analytics over big data is a challenging task, particularly in healthcare. However, it can aid healthcare practitioners in making quick decisions about patients' health and treatment based on big data. The performance and accuracy of ML algorithms used in predictive Data analysis for predicting the occurrence of diabetes are compared and analyzed across various disciplines. In this study, different classification Computational methods, which may involve various algorithms, such as SVM, KNN, Logistic regression, and Random forest, were considered, and their performance metrics such as Recall, F-Measure, Precision, and Accuracy were evaluated Derived from the confusion matrix. According to the experimental results, the SVM and ontology classifiers yielded the highest accuracy for diabetes prediction.*

Keywords: ML, Diabetes Prediction, SVM, KNN, Logistic Regression (LR), Random Forest.

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