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: 7.53
Volume 4, Issue 5, May 2024

Diabetes Prediction using Machine Learning

Aryan Sodhi[1], Dnyaneshwari Chaugule[2], Divya Patankar[3], Dr, Bhausaheb Shinde[4], Prof. Palak Desai[5]
Students, Department of Electronics & Telecommunication[1,2,3,4]
Faculty, Department of Electronics & Telecommunication[5]
Dhole Patil College of Engineering, Pune, India

Abstract: *This study explores the application of machine learning for diabetes prediction. Leveraging a dataset of relevant features such as glucose levels, BMI, and family history, various algorithms are employed to develop predictive models. The goal is to enhance early detection and management of diabetes, contributing to more effective healthcare interventions. Results indicate promising accuracy and potential for real-world implementation in preventive healthcare systems. This presents an approach for predicting diabetes using machine learning techniques. With the increasing prevalence of diabetes worldwide, early detection and effective management are crucial for mitigating its impact on public health. Leveraging machine learning algorithms, such as decision trees, support vector machines, and neural networks, this research aims to develop predictive models based on various patient attributes and medical history data. The dataset used for model training and evaluation comprises demographic information, clinical measurements, and lifestyle factors collected from diabetic patients. Through extensive experimentation and evaluation, the performance of different machine learning algorithms is compared in terms of accuracy, sensitivity, specificity, and area under the receiver operating characteristic curve (AUC-ROC). The results demonstrate the efficacy of the proposed approach in accurately predicting diabetes risk, thereby offering valuable insights for preventive healthcare strategies and personalized treatment plans.*

Keywords: Android, Machine Learning, Diabetes Prediction

Copyright to IJARSCT
www.ijarsct.co.in
DOI: 10.48175/IJARSCT-18485
ISSN 2581-9429 IJARSCT