

◆ Research paper

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Novel Risk Factors for Diabetes: A Comprehensive Analysis for Enhanced Disease Diagnosis

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Abstract: Diabetes mellitus, Type II, is a prevalent chronic condition with significant health implications worldwide. For management and intervention to be successful, an accurate and prompt diagnosis is essential. The accessibility of several data resources offers the chance to investigate novel concepts and improve the accuracy of diabetes diagnosis. Using the extensive Diabetes Dataset from the Iraqi community, this research seeks to evaluate diabetes-related biomarkers. The dataset consists of medical records and laboratory findings from 1000 people who were either diagnosed with diabetes, did not have the disease, or were expected to develop it. Blood sugar level, age, gender, creatinine ratio (Cr), body mass index (BMI), urea, cholesterol (Chol), fasting lipid profile, and HbA1c are among the many factors that are taken into account. A proper diabetes diagnosis is crucial since it has an immediate influence on patient care and management tactics. With the use of the Diabetes Dataset, this project aims to create a more precise diagnostic framework that would aid healthcare professionals in making decisions that will enhance patient outcomes. This research intends to improve the present diagnostic techniques by revealing hidden patterns, correlations, and prediction signs within the dataset. The study offers insights into the association between diabetes and numerous variables through careful data analysis and data-driven decision-making. This work helps continuing efforts to improve patient care

and treatment in this difficult area by addressing the urgent need for better diabetes diagnostic techniques.

Keywords: Diabetes, risk factor, data set, chronic disease.



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