IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 11, April 2025
Impact Factor: 7.67

AI-Based Health Monitoring System for Chronic Disease Risk Prediction

Dhruva Pai, Tarun R S, Karthikeyan M
Global Academy of Technology, Bengaluru

Abstract: *This project focuses on developing an AI-driven health monitoring system designed to assess the risk of chronic illnesses such as diabetes and heart disease. Unlike conventional tools that rely heavily on static data and often miss early warning signs, this system leverages real-time health information to provide timely insights. The goal is to support earlier detection and more effective prevention of serious health conditions.*

The system gathers and processes a wide range of health indicators like heart rate, blood pressure, glucose levels, and physical activity. It also considers individual risk factors such as age, lifestyle choices, and past medical records. Using advanced deep learning methods and transformer-based models, the system delivers precise health risk evaluations and sends timely alerts—helping individuals take early action and better manage their well-being.

To improve its predictive accuracy, the model is trained using comprehensive datasets that include patient medical records and indicators of chronic illnesses. This training allows the AI to recognize patterns across various individual health profiles, making it versatile and reliable for different types of users. As the system continues to learn from new information over time, it stays accurate and consistently delivers dependable results.

By automating key aspects of health monitoring and data analysis, this AI-powered system makes managing chronic conditions easier and more efficient. It provides a real-time, intelligent alternative to traditional methods, enabling more personalized and proactive care. With its focus on early risk identification and timely intervention, the solution holds great promise for improving outcomes in chronic disease management.

Keywords: health monitoring system

DOI: 10.48175/IJARSCT-25819