



AI-Powered Predictive Healthcare System

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Abstract

Healthcare generates vast data from electronic health records (EHRs), wearable devices, and clinical databases, making traditional diagnostic methods inadequate for timely insights. Artificial Intelligence (AI) and Machine Learning (ML) provide powerful solutions to predict health risks, support preventive care, and improve decision-making.

This project, AI-Powered Predictive Healthcare System, applies supervised ML algorithms such as Naïve Bayes, Support Vector Machine (SVM), Logistic Regression, and Random Forest to predict diseases like cardiovascular conditions and diabetes. Tools including Google Collaboratory, TensorFlow, Scikit-learn, and Pandas were used for training and evaluation.

The system achieved reliable predictive performance, demonstrating how AI can enhance efficiency, reduce costs, and enable proactive healthcare. This work highlights the societal impact of integrating AI with healthcare for improved patient outcomes and smarter medical systems.