HealthCure AI Driven Diagnosis and Treatment Advisor

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Abstract:

HealthCure is an advanced AI-powered healthcare platform designed to revolutionize the diagnosis, management, and treatment of complex diseases using cutting-edge machine learning methodologies. By integrating algorithms like Convolutional Neural Networks (CNNs), XGBoost, and transfer learning, the system delivers tailored health assessments for conditions such as Kidney Disease, Diabetes, Pneumonia, and Heart Disease. HealthCure ensures secure user access to facilitate personalized evaluations based on patient demographics, medical history, genetic factors, and clinical metrics, including blood pressure, glucose levels, and imaging data (e.g., CT scans, X-rays).For Kidney Disease, the platform analyzes CT scans to detect kidney stones and provides individualized care recommendations. Diabetes management involves predicting outcomes using metrics like glucose levels and BMI, while Pneumonia detection utilizes chest X-rays and symptoms to determine severity. In Heart Disease assessment, cardiovascular imaging supports the evaluation of conditions like hypertrophic cardiomyopathy (HCM). A built-in chatbot, powered by large language models (LLMs), offers tailored diet plans, recovery schedules, and hospital recommendations for critical cases. The system's secure storage of health data enables continuous learning, improving predictions and delivering timely insights.HealthCure exemplifies a transformative step in healthcare innovation by facilitating early diagnosis, personalized treatment plans, and enhanced patient engagement through AI-driven solutions.

Keywords:

AI healthcare, disease detection, machine learning, CNNs, XGBoost, transfer learning, Kidney Disease, Diabetes, Pneumonia, Heart Disease, medical imaging, LLM-powered chatbot, personalized medicine, healthcare technology.