(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :26/03/2025

(21) Application No.202541028408 A

(43) Publication Date : 25/04/2025

(54) Title of the invention : Smart Healthcare System for Early Disease Detection Using Machine Learning

(51) International classification :G16H0010600000, G16H0050200000, G16H0050300000, G16H0050700000, G16H0040670000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Abstract: The present invention discloses a smart healthcare system designed for early disease detection by leveraging machine learning and IoT-enabled health monitoring devices. The system continuously collects physiological data from wearable and non-wearable sensors, processes it using advanced AI models, and provides real-time insights into potential health risks. It integrates deep learning algorithms, cloud computing, and edge computing to enable rapid and accurate disease prediction. The system generates alerts for patients and healthcare providers, facilitating timely medical intervention. It also supports seamless integration with electronic health records (EHRs) and ensures data security through encryption and blockchain technology. The invention enhances preventive healthcare, reduces hospital admissions, and supports personalized health recommendations, significantly improving patient outcomes and healthcare efficiency.

No. of Pages : 14 No. of Claims : 7