4186

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/10/2024

(21) Application No.202421078029 A

(43) Publication Date : 15/11/2024

(54) Title of the invention : AI-POWERED SMART PILL BOTTLE FOR MONITORING MEDICATION ADHERENCE

(51) International classification :G06N0020000000, G16H0010600000, G16H0040670000, G16H0020100000, G06N0003045000

(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 :
Disclosed herein is a method (100) for AI-powered smart pill bottle for monitoring medication adherence, comprising equipping a pill bottle with multiple sensors, including weight sensors, optical sensors, and motion sensors, to accurately detect pill removal and potential consumption. The method (100) also involves collecting real-time data on medication usage patterns, environmental conditions, and patient behavior using the equipped sensors. The method (100) also involves preprocessing and analyzing the collected data using edge computing capabilities within the smart pill bottle. The method (100) also involves securely transmitting the processed data to a cloud-based AI system for further analysis and storage. The method (100) also involves integrating the medication adherence data with other health data sources, such as electronic health records and wearable device data. The method (100) also involves using machine learning algorithms to identify patterns and predict potential non-adherence events. The method (100) also involves generating personalized adherence reports and insights for patients and healthcare providers. The method (100) also involves delivering context-aware reminders and interventions through multiple channels based on individual patient preferences and adherence patterns.

No. of Pages : 28 No. of Claims : 10