

MedBox Alert: AI and IoT-Powered Smart Pill Assistant for Intelligent Healthcare

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Abstract: *In today's modern world, people are leading fast-paced lives, often juggling work, studies, and personal responsibilities. In such a busy routine, many patients — especially the elderly, people with chronic diseases, or those living alone — forget to take their medicines on time. Missing doses or taking the wrong pill can lead to serious health problems. To address this issue, our project proposes a MedAlert Box, an IoT-based smart medicine dispenser that automatically reminds users to take their medication at the right time, dispenses the correct dose, and notifies family members or caretakers if the dose is missed. This system uses a combination of hardware (sensors, actuators, microcontroller) and software (mobile app, database, and IoT connectivity) to manage medicine schedules efficiently. It also sends alerts for low stock or medicine expiry to ensure continuous safety. The main goal of the project is to create a reliable, user-friendly, and affordable system that supports patients in maintaining their health independently while keeping family members informed in real-time.*

Keywords: Internet of Things (IoT), Smart Healthcare, Medicine Reminder, Automatic Pill Dispenser, Wireless Communication, Mobile Notification System, Real-Time Monitoring, Voice Alert System, Cloud Connectivity, Sensor-Based Automation

