

# Smart Pill Dispenser

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Technology Award

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## Pillar of Health

Administering medication at home can be challenging for elderly patients and caregivers, who often struggle with tracking timings and dosages, risking errors that affect recovery.

To overcome these issues, the team created a system combining a web app and automated pill dispenser. Users can set medication details and schedules, prompting the dispenser to release the correct pills on time.

This solution reduces errors and provides reassurance to families, earning the 'Most Innovative Award' at the Asia Design-to-Make Skills Competition 2025.

## Innovators' Inspiration

*"When our lecturer shared how tough it was to manage his parents' medication, my team wanted to do more than just offer him a basic pill box. We had no experience in coding or product design but knew there had to be a way to automate the process. At first, our code failed and the motor wires kept getting in the way of the dispensed pills. It was a mess but we kept on refining and improving our design. This experience really opened my eyes to the power of solving real-world problems. Everyone in my team chipped in so we could build something that can help others."*

- Nur Shafiqah Binte Muhammad Hafidz

## What's So Special?

- The web application enables personalised scheduling where users can customise the system to specific medication needs.
- The dispenser can store up to a month's supply of pills, reducing the need for frequent refilling of medication.
- The device was produced using eco-friendly Polylactic Acid filament through 3D printing, keeping costs low while supporting sustainability.
- An LED light strip at the dispenser's base enhances visibility in low-light conditions while adding a sleek, modern aesthetic.
- The system also has potential to be developed into a mobile application with push notifications and sound alarms to remind users to take their medication, and future enhancements could incorporate AI features, with sensors or cameras to verify the identity of the individual collecting the dispensed medication.