ShelfMate

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Reducing Food Waste

ShelfMate tackles the issue of food waste in households, through an innovative solution. The system combines hardware, software, and a mobile app to track and optimize the use of groceries.

Features

1. Place an item in front of the scanner. The scanner reads the barcode and displays product details (name, expiration date, etc.) on the Touchscreen.
2. Adjust information if necessary (e.g., change expiration date) on the touchscreen or it saves automatically.
3. ShelfMate automatically logs the item into your digital inventory.
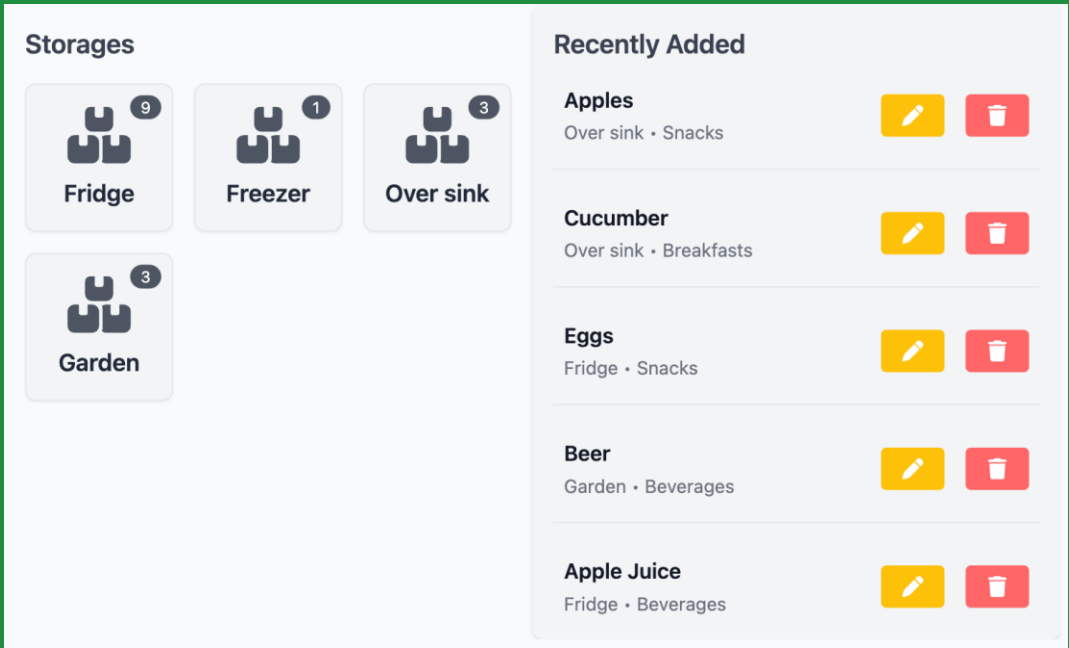4. View items everywhere on the go with the Webapp

Technology

Hardware:
- Powered by RaspberryPi
- HD Camera Module
- Buzzer for Audio Feedback

Software:
- Intuitive ReactJS Interfaces
- Camera vision powered by OpenCV in Python
- Developer friendly NestJS API

Ideas for further development

- AI vision for analyzing products without barcode
- User management to share or manage any household
- Suggest recipes based on inventory

The Prototype

Creating a sustainable fu