Smart Inventory Palletes

(Embedded + SaaS Integration)

Smart Inventory System for Beverage Distribution Using Embedded IoT Devices and Cloud-Based SaaS Platform

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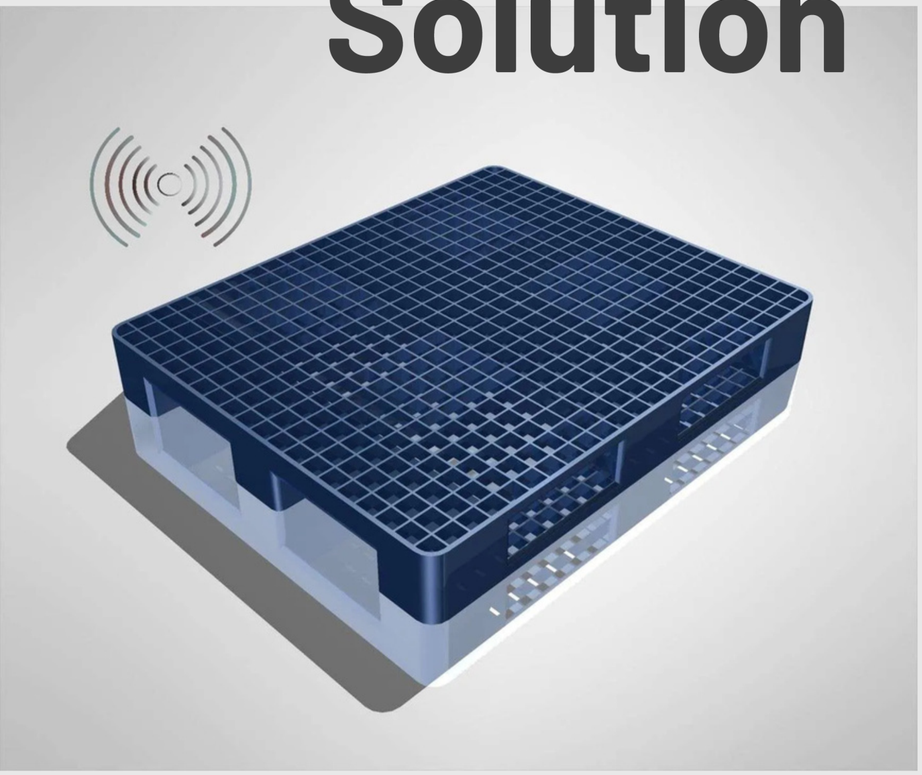
About the Project

Beverage inventory management often faces issues like manual stock handling, delays in restocking, and poor real-time visibility. This project proposes an embedded IoT solution that automates stock tracking by integrating smart sensing devices with a cloud-based SaaS platform. It builds on my existing SaaS system for beverage distribution and focuses on real-time, automated warehouse inventory updates using embedded hardware.

Solution



Real-Time Updates

- Data is visualized on the existing SaaS dashboard.
- Alerts are sent if stock drops below threshold.
- All actions logged for reporting and auditing.

Smart Inventory Palletes (Embedded Device)

- Load Sensors measures weight of bottle crates or product bins.
- Microcontroller reads sensor data and calculates real-time stock quantity based on weight.
- Device sends data to cloud every few seconds or when weight changes.

SaaS Integration (Backend & Dashboard)

- Cloud API receives weight data and maps it to specific product units (e.g., 1 bottle = 1kg).
- Automatically updates:
- Current Stock
- Sales (difference between load & unload weight)
- Daily/weekly reports

Result

- A fully automated, real-time warehouse management system with zero manual input

Thank you!