Hydration-Companion

Meet the Hydration Companion!

A smart hydration system designed for your well-being. This innovative system features a smart cup that tracks your water intake and a complementary display unit showing your progress.

Misplaced your cup? Just press a button on the display to activate a gentle alert from the cup.

Simple, elegant, and perfect for the health-conscious, the Hydration Companion is more than a gadget – it's your personal hydration coach, ensuring you stay refreshed and hydrated every day.

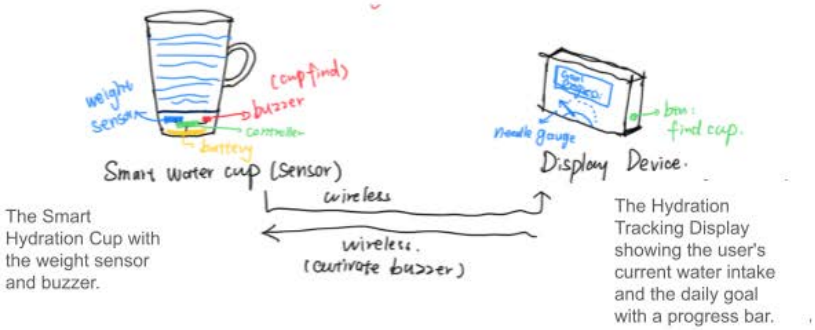
Project Ideation and System Architecture

Hydration Companion

Description

This system integrates the Smart Hydration Cup and the Hydration Tracking Display to provide a comprehensive hydration monitoring solution. It ensures that the user is consistently reminded to meet their daily water intake goals through interactive alerts and visual feedback.

Sketch



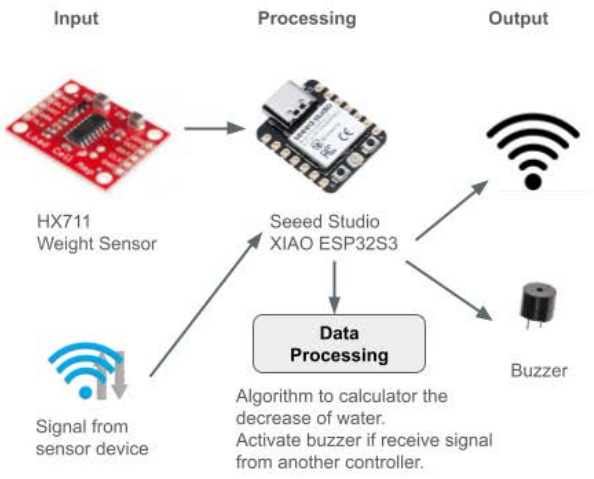
Smart Hydration Cup (sensor device)

Description

This device tracks the volume of water with a weight sensor and issues alerts via a buzzer. It communicates wirelessly with the display device.

Components

- Weight Sensor: HX711
- Microcontroller: Seeed XIAO ESP32
- Buzzer: Piezoelectric Buzzers
- Battery: AA or AAA Batteries



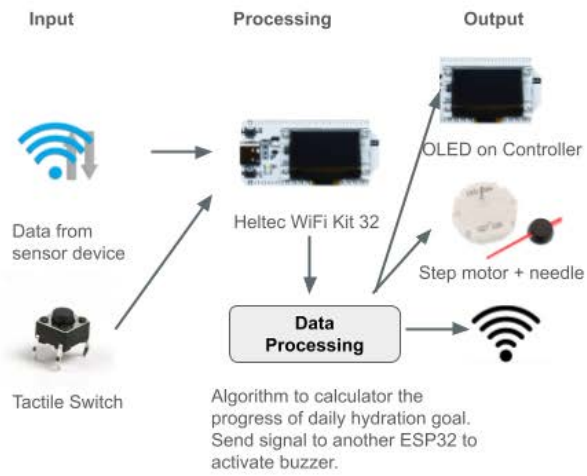
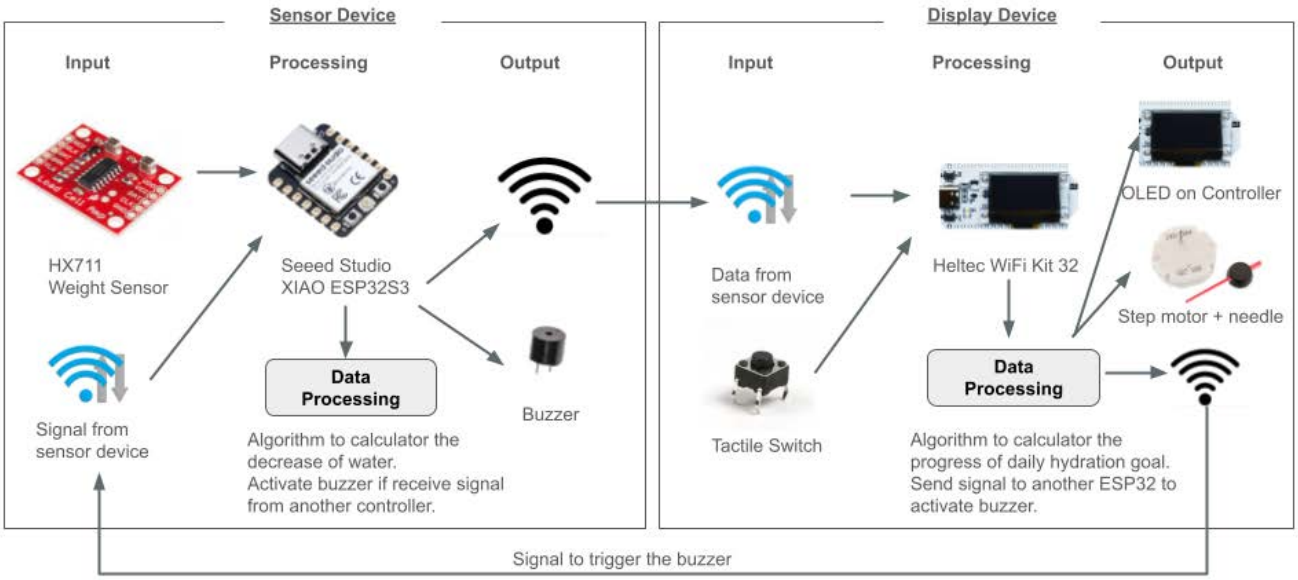
Hydration Tracking Display (display device)

Description

This unit displays the daily water intake, hydration goals and the progress. It features a button to activate the cup's locating buzzer.

Components

- Microcontroller: Heltec WiFi Kit 32 (with Screen)
- Screen: Screen on Heltec WiFi Kit 32
- Progress: Stepper-motor driven gauge needle
- Button: tactile switch (to trigger the cup finder feature)
- Battery: AA or AAA Batteries



System Architecture