SHAFT - SMART HOLDER AND ALERT FOR FORECAST TRACKING

USER MANUAL
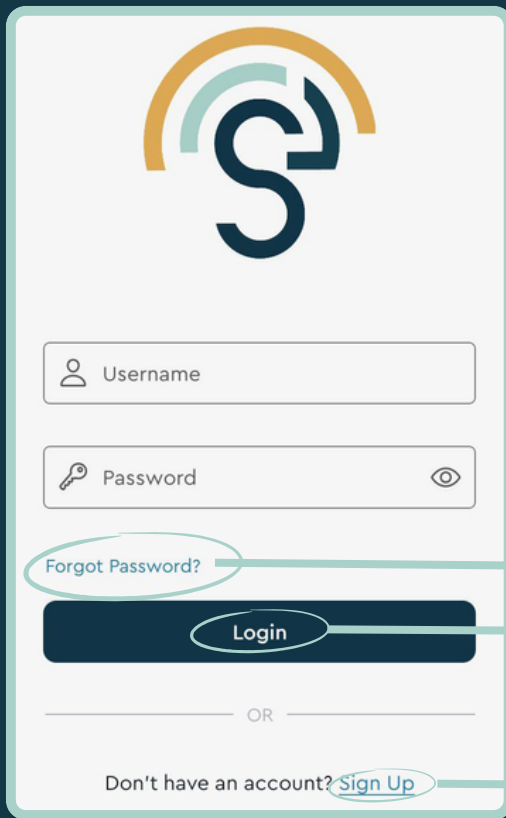
SHAFT 2025

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DESCRIPTION

The SHAFT is an IoT-powered device designed to help users remember their umbrellas during rainy weather. It integrates weather forecasting, weight detection, and umbrella presence tracking to ensure users take their umbrella when rain is expected and remind them to return it afterward. The stand detects the presence of an umbrella using a weight sensor and sends notifications via a mobile app.

LOGIN

LOGIN

- This serves as the entry point where users input username and password to access individual accounts.
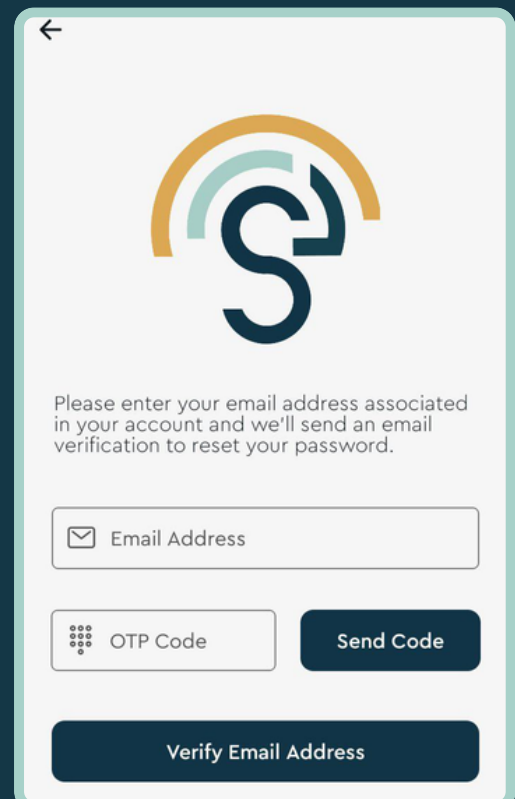
Forgot Password

Login Button

Signup Button

FORGOT PASSWORD

- Allow users to reset their password by providing their email

CODE VERIFICATION

- After entering the email, a one - time password (OTP) will be sent to the specified email for verification and password reset purposes.

SIGNUP

The signup process allows users to create an account for SHAFT. It consists of two steps: entering personal details and setting up login credentials.

STEP 1: GET STARTED

Get Started
Please fill out your personal info.

- First Name → Enter your given name
- Middle Name (Optional) → You may enter your middle name, but it is not required.
- Last Name → Enter your surname
- Gender → Select your gender from the dropdown list
- Month / Day / Year → Choose your birth month, day, and year using the dropdown calendar
- Create an Account → Click this button to proceed to the next step

STEP 2: ACCOUNT SETUP

Account Setup
Enter your account details and we will verify your email to finish setting up your account

- Username → Choose a unique username for your account
- Password → Enter a secure password
- Confirm Password → Re-enter the password to ensure accuracy.
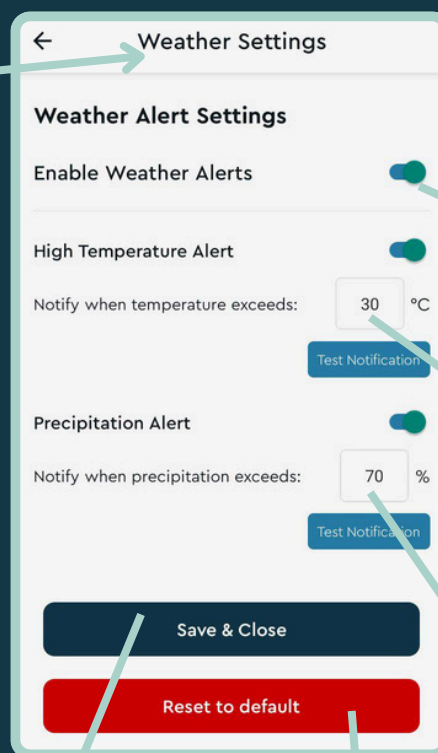- Email Address → Provide a valid email for account verification.
- Create Account → Click to complete the registration process

SET THRESHOLD/ WEATHER SETTINGS
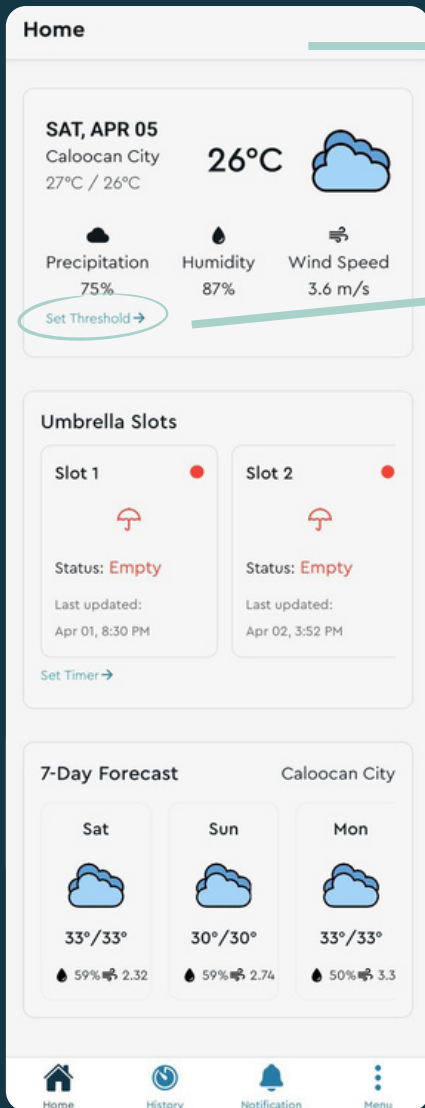
The home screen displays the current weather, umbrella slot status, and a 7-day forecast. Users can set precipitation thresholds for alerts.

Home

SAT, APR 05
Caloocan City
27°C / 26°C

26°C

Precipitation — 75%
Humidity — 87%
Wind Speed — 3.6 m/s

Set Threshold →

Umbrella Slots

Slot 1	Slot 2
☂	☂
Status: Empty	Status: Empty
Last updated: Apr 01, 8:30 PM	Last updated: Apr 02, 3:52 PM

Set Timer →

7-Day Forecast — Caloocan City

Sat	Sun	Mon
33°/33°	30°/30°	33°/33°
59% 2.32	59% 2.74	50% 3.3

Home · History · Notification · Menu

Weather Settings

← Weather Settings

Weather Alert Settings

Enable Weather Alerts ⬤

High Temperature Alert ⬤

Notify when temperature exceeds: 30 °C

Test Notification

Precipitation Alert ⬤

Notify when precipitation exceeds: 70 %

Test Notification

Save & Close

Reset to default

Toggle this switch to turn weather notifications on or off.
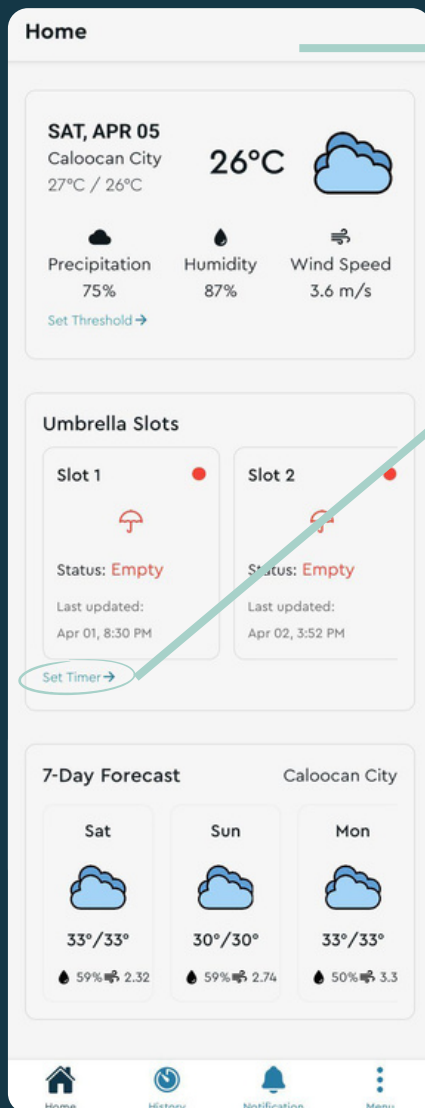
Set a temperature threshold to receive alerts when it is exceeded.

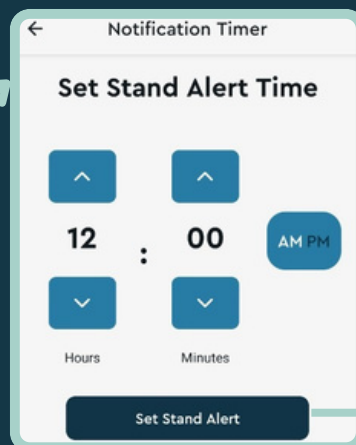Set a precipitation percentage to receive alerts when it is exceeded.

Save your settings and return to the home screen.

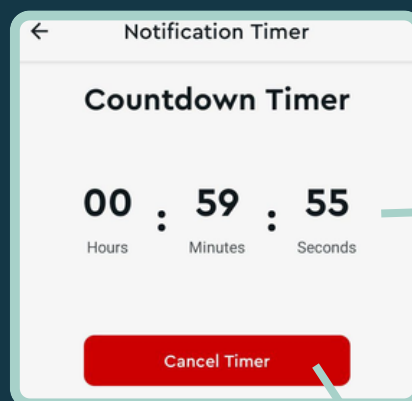Restore the default weather alert settings.

SET TIMER IN UMBRELLA SLOTS

The home screen displays the current weather, umbrella slot status, and a 7-day forecast. Users can set timer.

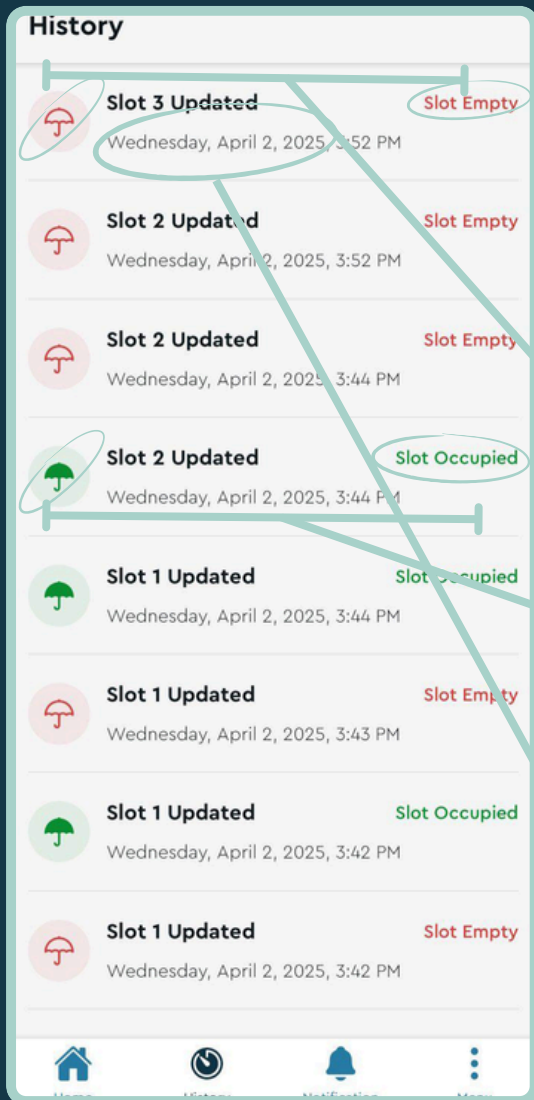Choose a specific time to receive reminders about your umbrella.

Confirm and save the selected alert time.

Displays the time remaining until the next alert.

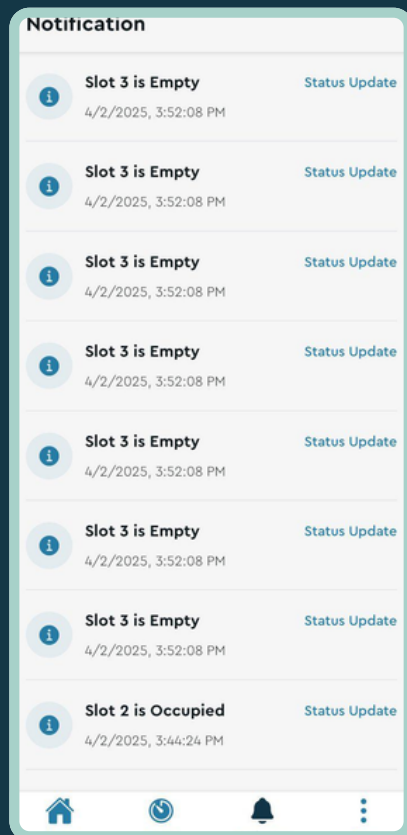Stop the countdown and disable the alert

HISTORY

The History page logs all updates related to umbrella placement and removal. It helps users track when an umbrella was last taken or returned.
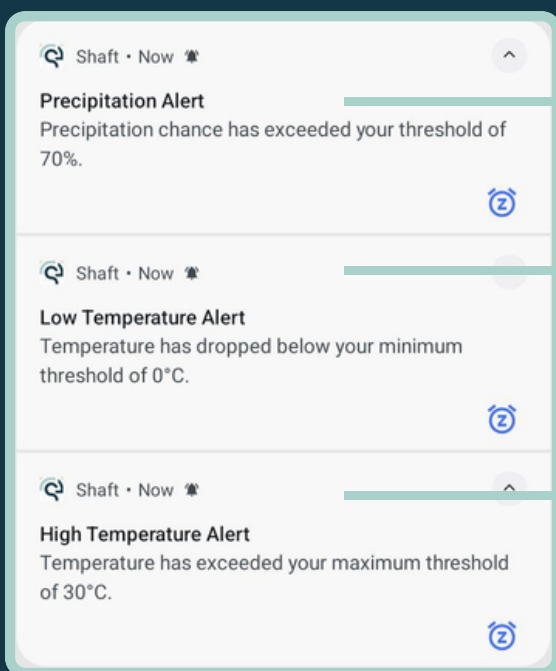
The umbrella was removed.

The umbrella was placed back.

Shows the exact date and time of the status change.

NOTIFICATION

The Notification page provides timely updates on umbrella slot status and weather conditions to help users remember their umbrellas.

Notifies users when rain probability exceeds a set threshold

Warns users if the temperature drops below their set minimum threshold.

Notifies users when the temperature exceeds their set maximum threshold.

MENU (EDIT PROFILE, WEATHER SETTINGS, SET TIMER)

Menu

SHAFT

Profile Settings

👤 Edit Profile ›

☁️ Weather Settings ›

🕐 Set Timer ›

Account Settings

↪️ Log Out ›

The Menu provides access to essential settings, allowing users to customize SHAFT experience. Users can edit profile, adjust weather alerts, set reminder timers, and log out of the app.

← Profile SAVE

First Name
👥 SHAFT

👥 Middle Name

Last Name
👥 e

Birth Date
📅 Month ⌄ Day ⌄ Year ⌄

Gender
⚥ Female ⌄

The Edit Profile section allows users to update personal information for a personalized experience.

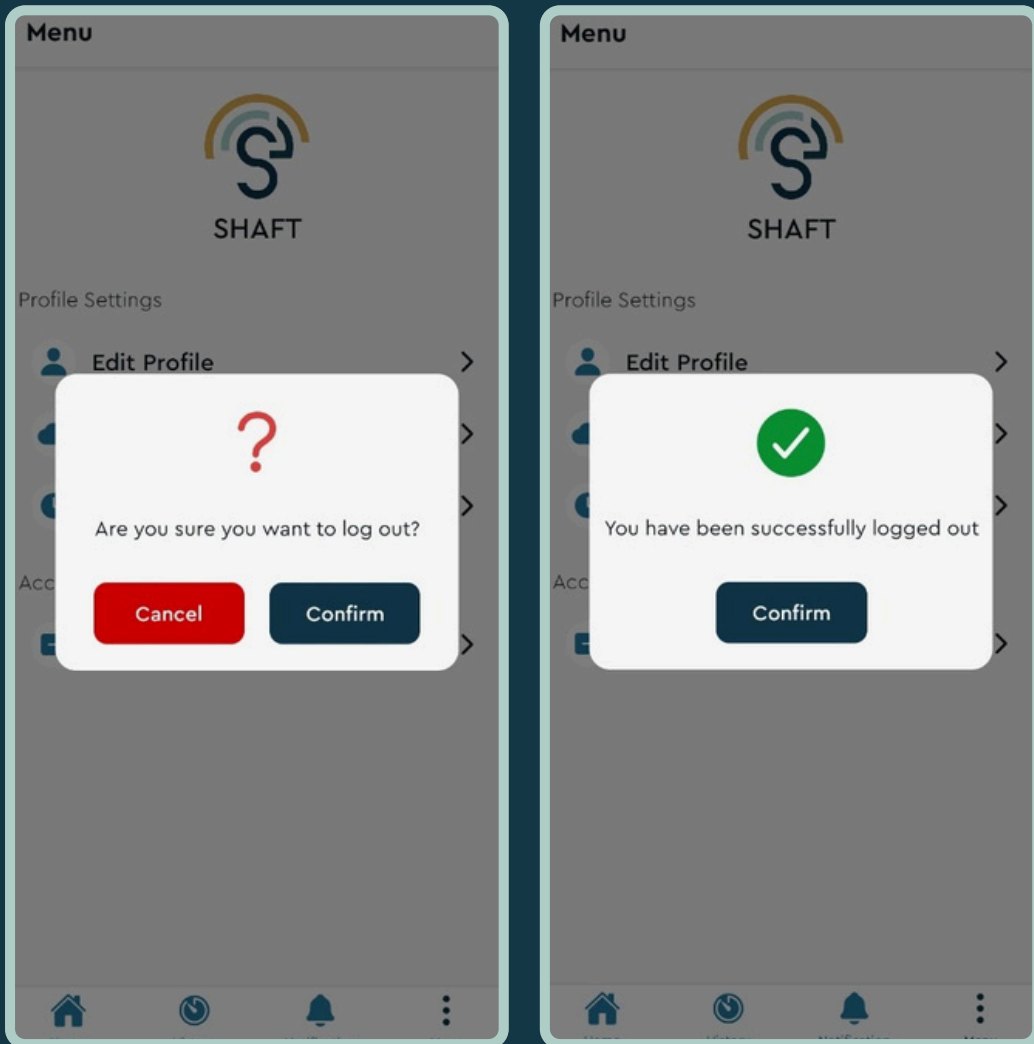Confirms and saves any changes made to the profile.

Enter or update your first name.

Enter or update your middle name.

Enter or update your last name.

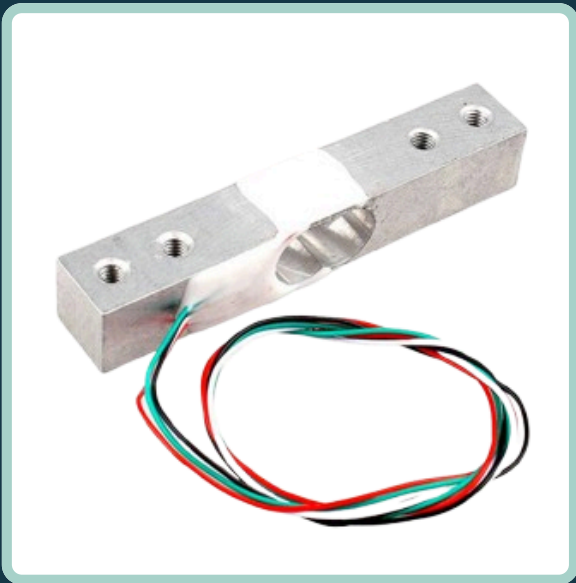Select your date of birth (Month, Day, Year).

LOGOUT

The Logout feature allows users to securely sign out of the SHAFT mobile app. When selecting the logout option, a confirmation prompt appears to prevent accidental logouts. Upon confirmation, the system processes the request and notifies the user of a successful logout.

PROTOTYPE
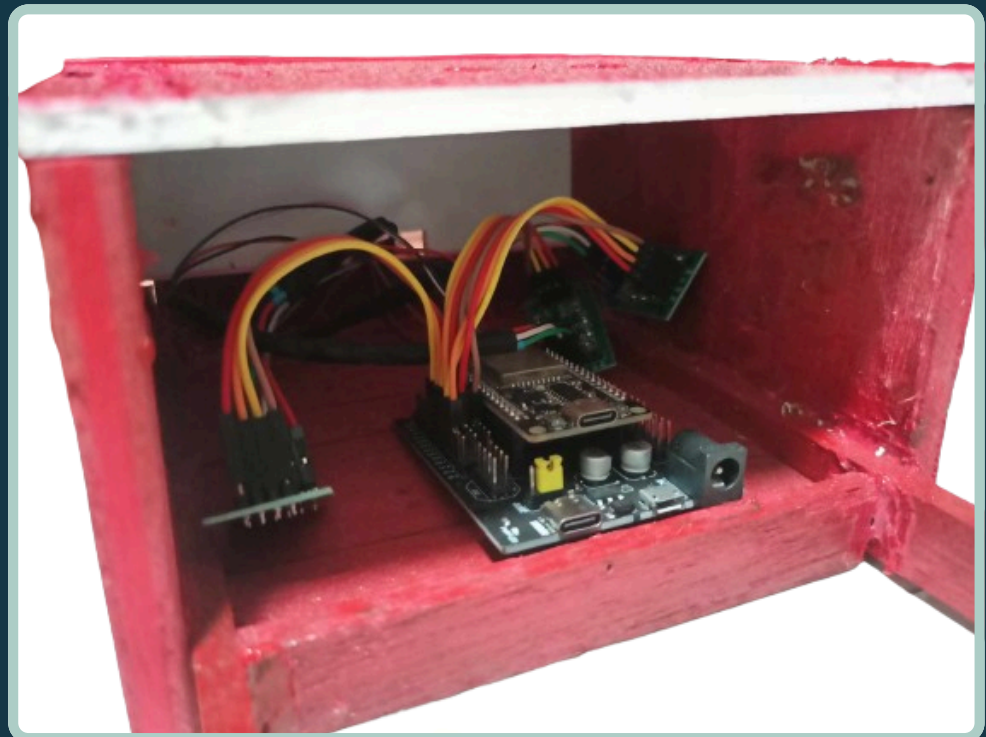
SENSORS

The Straight Bar Load Cell Weight Sensor checks if the umbrella is on the stand by measuring weight. When the umbrella is placed, it feels the weight and tells the system. If the umbrella is missing, it can remind you through the app. Make sure the sensor is flat and not blocked for best results.

The ESP32 is the main controller of the device. It connects to the internet, reads data from sensors, and sends alerts to your phone. It helps the system work smartly by checking the weather and tracking the umbrella.
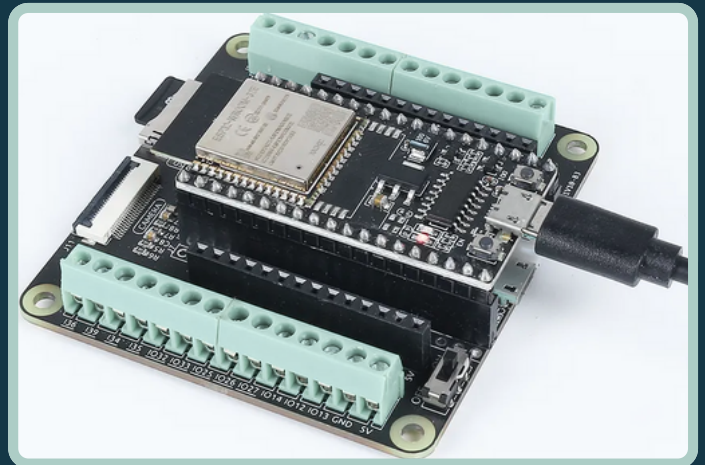
MEMBERS:

CARLOS, SEBASTIAN MIGUEL
CORONEL, GENESIS
DOMO-OS, WOWIE
EVANGELISTA, JOHN CHRISTIAN
HORCA, RAVEN
LAPIDEZ, ROVELYN
PANLILIO, KRISTINE LEDA
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SIMON, JERMAINE CHARLES