Stove Reminder Device

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Overview

- Identified that electric stoves being left on could lead to a dangerous situation.

- The goal of the device is to identify this danger and alert the user

- Device uses a light and temperature sensor for detection

- An additional feature is to alert the user even when they are not home.
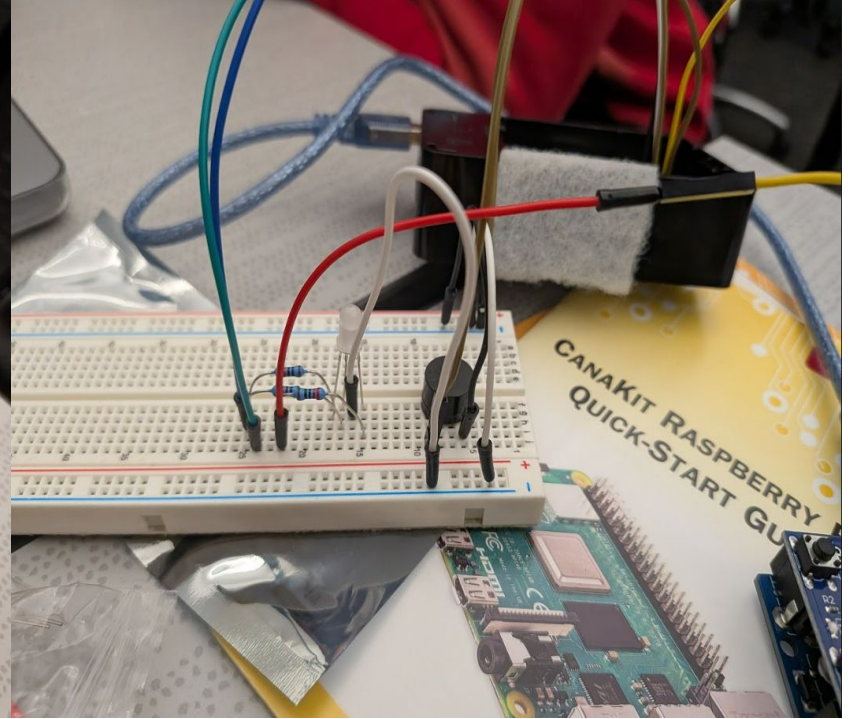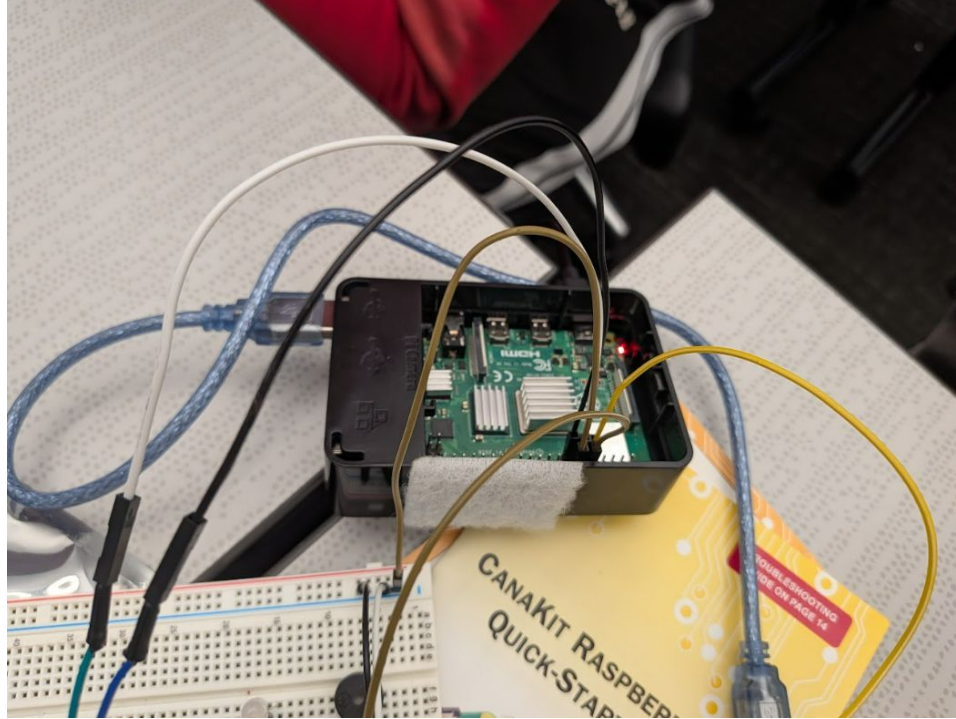
Design Overview

- Inputs

  - Temperature Sensor

    - Changes LED color based on a given temperature threshold

  - Light Sensor

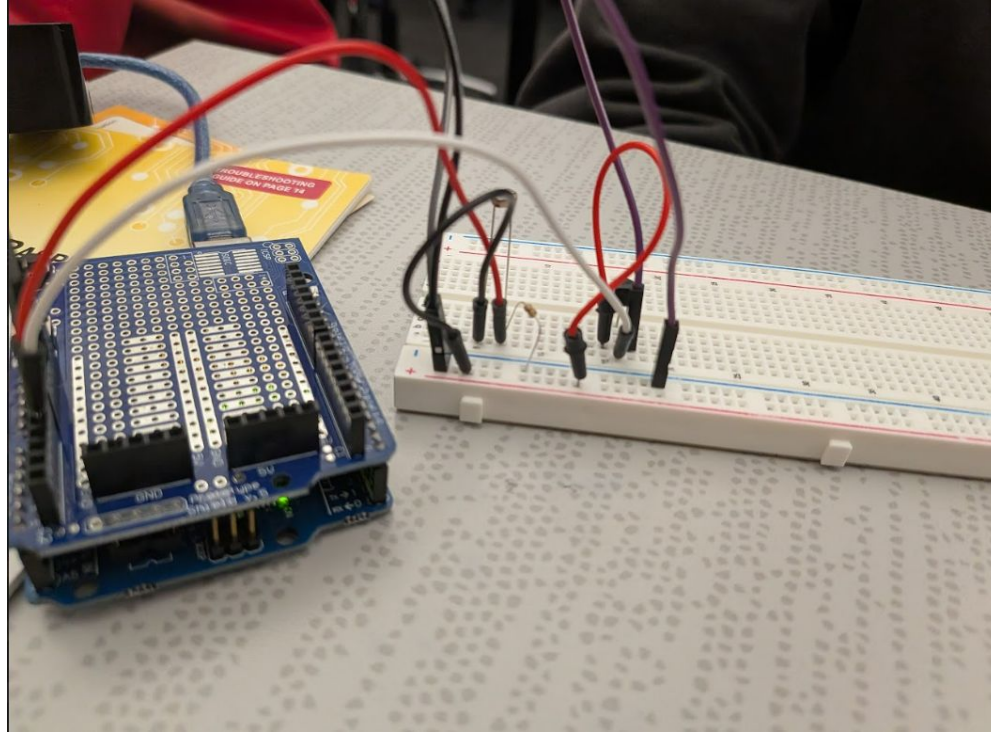   - Changes LED color based on a given light threshold

Design Overview

- Outputs

  - Buzzer

    - Alarms when unsafe conditions are detected

  - Text Message System

    - SMS message is sent to a registered number in unsafe conditions

  - RGB LED

    - LED changes color based on different light and temperature conditions

    - Red for unsafe, Yellow for low light, and Green for safe
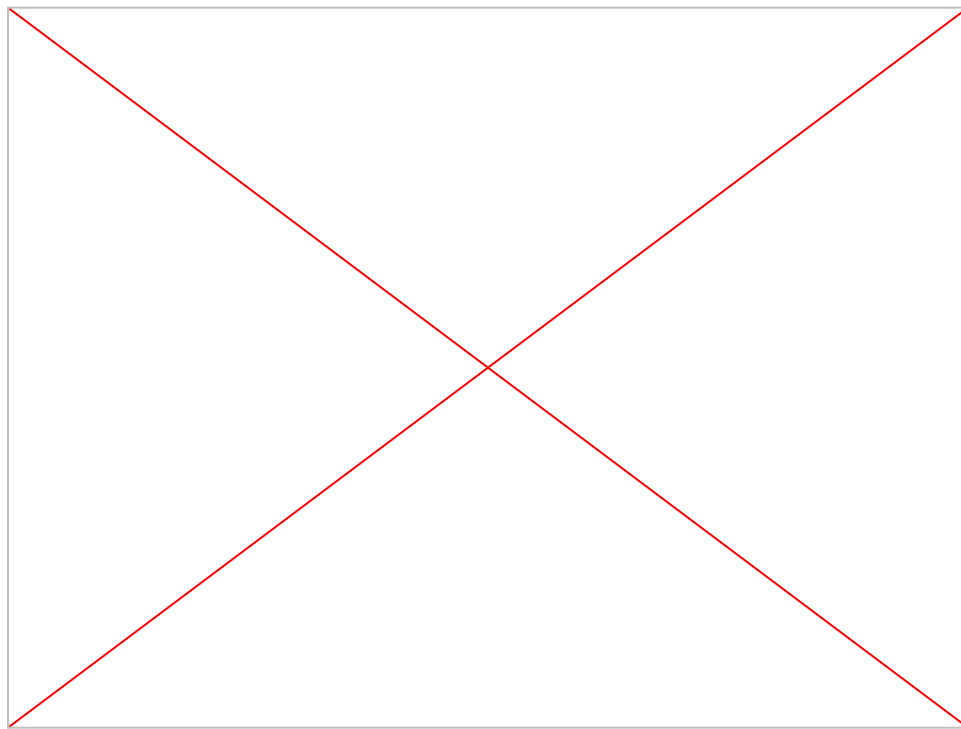
Device Setup

Device Setup

Demo

Challenges

- Requires internet connection for email to SMS messaging

- Potential for unwanted false alarms

- Could be finicky with positioning in a kitchen.

Conclusions and Improvements

- Improving upon the accuracy is the most important function

- Could potentially employ a variety of other sensors for different

  functionalities

- More robust messaging system to work without internet

- Implement a computer vision system to improve accuracy