Product Release

Project Description

The UV Shield device that allows users to see if they are applying enough sunscreen to avoid UV radiation. The device's main components consist of a Raspberry Pi 3 B, power source, 4-inch LCD screen, UV LED light bar, UV camera, switches, UV filter, and PCB board. Software implementations include python code, command line scripts, and changes to the kernel's boot process. When the device is turned on it displays a loading bar that indicates the progress the device is making during boot. Once booted up the UVis device goes directly to the camera feed displaying the user. Once the device is running the user can use the touch screen to take a still image of themselves that will display until they touch the screen again. In addition, there are two buttons one that toggles the UV LED light bar, and the other that shuts down the device properly.

Below are links to a YouTube video demonstrating the current vertical slices of the project, and a GitHub link to the repository consisting of all our documentation including, code, specifications, and schematics.

YouTube: https://youtu.be/gachv7j_ROc

GitHub: **https://github.com/alexistodd/UVis**

Operating procedures can be found on the main README file for the project.

Progress since the release candidate.

- PCB created to operate the UV LED light bar and cherry MX switches.
- Proper UV filter received to display correct light spectrum for the camera.
- Final case built and printed to house the UVis device.
- Touch screen capabilities added to the device.
- Still image functionality added with the touch screen interface.
- Loading bar added during boot.