EVA (Elderly Virtual Assistant)

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Goals

We wanted to help elderly adults take their medication properly. We also wanted to do it in a way that allows the user to retain their independence.

From the perspective of the Family members / physicians, we wanted to have a way for them to get an accurate idea of the users medicine taking habits, and have a way of monitoring them without needing to be present

Intellectual Merit

There currently exists no method of medication reminder and monitoring that is usable by the majority of elderly adults (75 years and older). We've developed a system that is user friendly and intuitive, so that an 8 year old and an 80 year old could utilize the device.

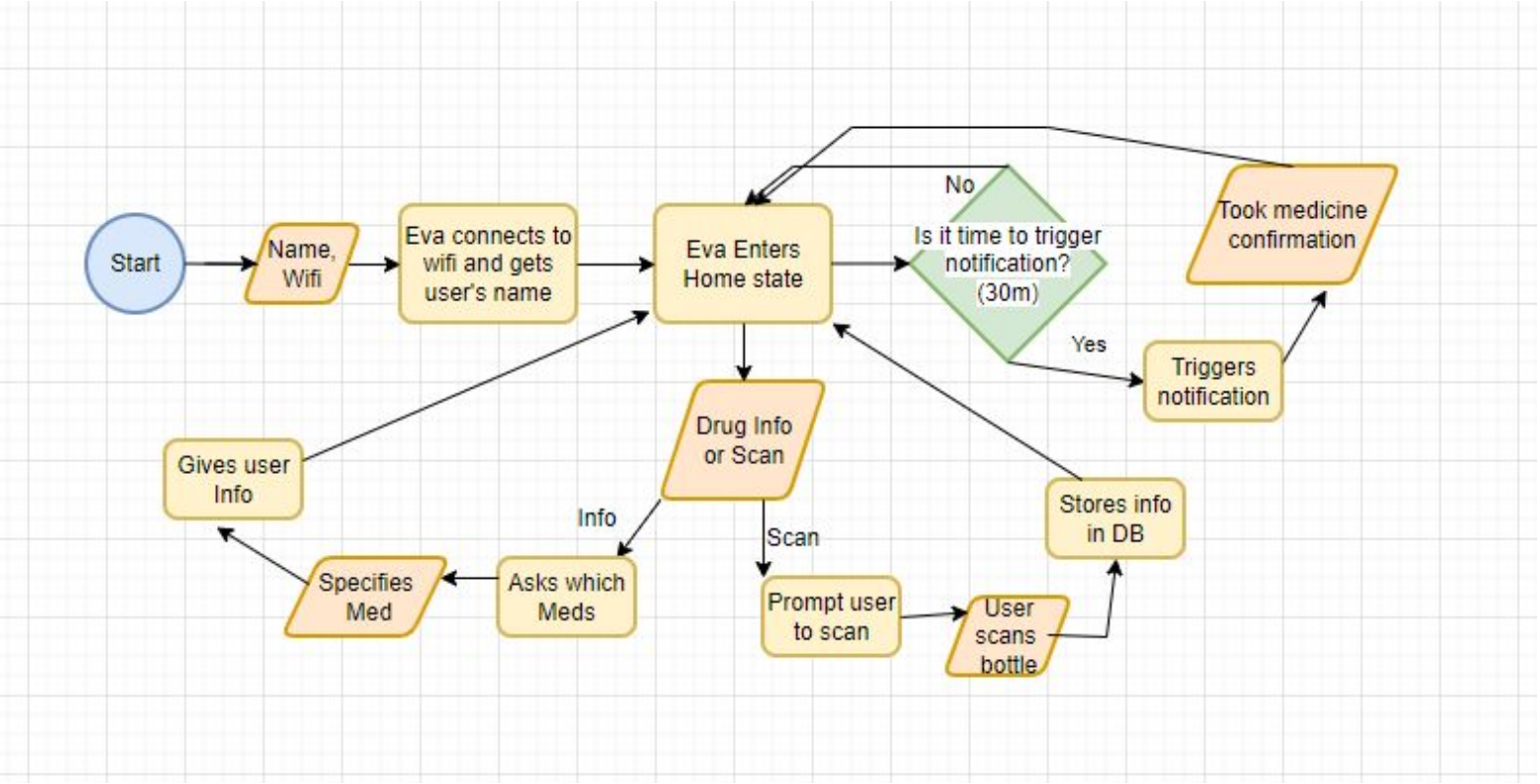
This device could help a lot of people and help physicians have a more accurate picture of the users medicine taking habits so that they can more appropriately provide medical solutions to existing issues. The device can also track some other metrics to detect medical issues before treatment would no longer be effective.

Broader Impacts

By utilizing this device, elderly adults will be able to retain more of their independence, since the need for someone to monitor their medicine taking will be fulfilled by EVA. This would mean much more independence / less responsibility for children and caretaker of these elderly adults.

Furthermore, accurate administering of medicine will lead to helping more elderly adults dealing will illness. This could mean longer life spans for users and detection of diseases earlier on.

Design Specifications



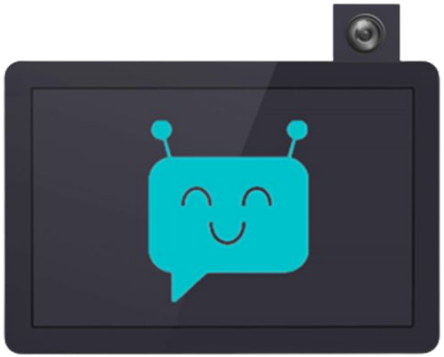
Technologies

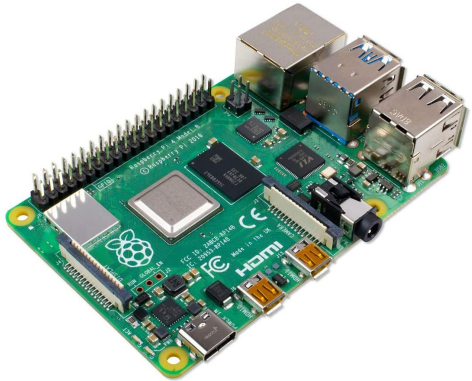
Python

PostgreSQL

Google Cloud Speech API

OpenCV





Milestones

10/19 First Full Team Meeting

11/2 Able to retrieve Drug Info

11/22 Implemented voice UI

1/15 Developed reminder SW

1/20 Generated Reporting Feature

2/20 Developed Scanning SW

3/18 Developed UIs for Touch Screen

3/24 Loaded Code onto Device

Results

Although Eva has some bugs, we're at a great point along the way in the development of the system. We have code loaded onto the machine and it has the ability to scan bottles, notify users when to take their meds and generate reports. It also can provide the user with drug information, and the user can interact with the device via voice and touch.

Between now and the Demo, we want to work out the bugs that we have and implement more reports that the device can generate. We also want to stress test the actual hardware and see how it holds up. The major things include interfacing the voice UI and the touch GUI, making a home screen gui, and attaching the camera to the device

Challenges

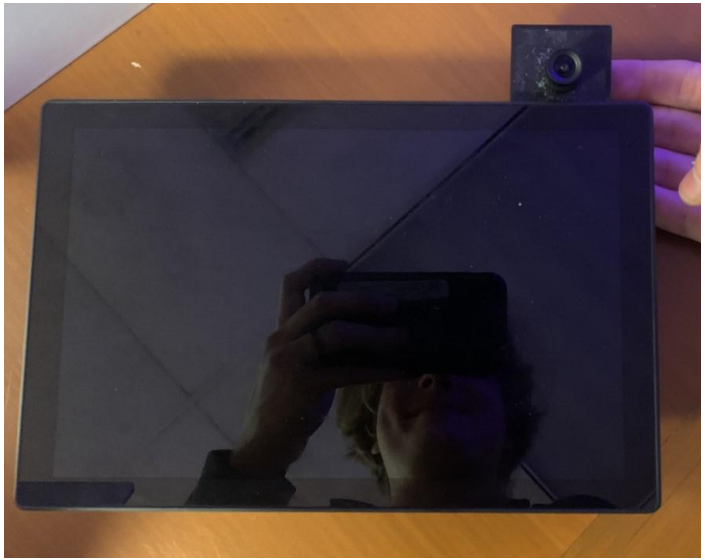
Printing issues, initially wanted to add a pillar for the device to sit on but ended up going a different route. Waste of time and resources.

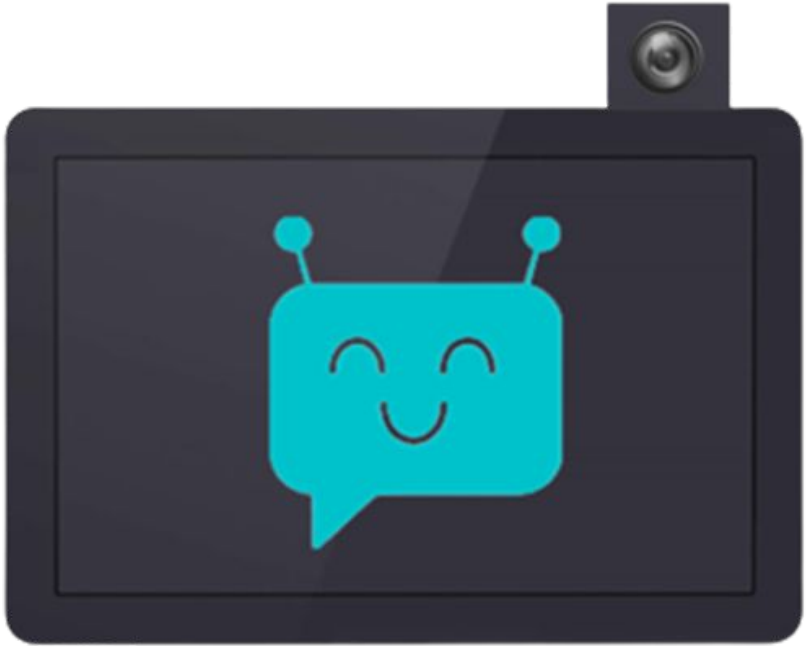
UI needs to be VERY simple for an Elderly Adult.

Lots of Tech that we've never used before and have had to learn.

Huge scope of project, tough to keep scope size small.

Actual Device and Poster Image





GUI Example (draft)

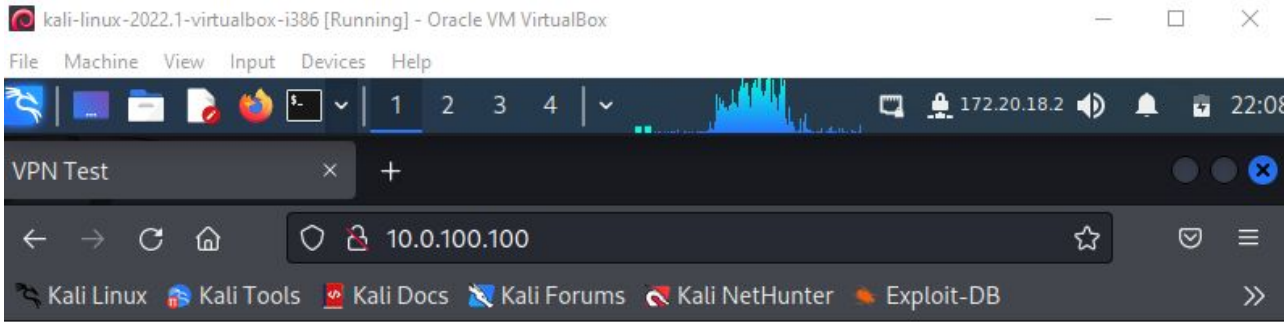
hi

Have you taken your medicine yet?

No

Yes

IDK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File Machine View Input Devices Help
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VPN Test
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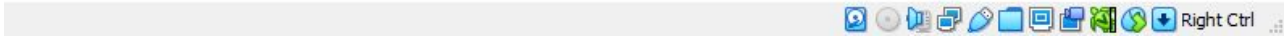
Kali Linux Kali Tools Kali Docs Kali Forums Kali NetHunter Exploit-DB
VPN Testing
You have successfully connected.
Review a copy of the Rules of Engagement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