Meeting Notes

Meeting 1 [IP]
October 3rd, 2022, 3:00PM

Time Keeping:

Everybody attended.

Meeting Notes:

Went through specifications and overview of project, then looked at the four challenges and then brainstormed some ideas :

Decided to use Notion platform as an organisation tool

Ideas:

- Face Recognition app for detecting closed eyes while driving
- Skin disease detection device
- Shaking gyroscope stabiliser device for elderly
- Computer Vision Fridge that tracks the products and their expiration dates
- Carbon Footprint Calculator Device

Picked two ideas and decided that we will spend time on our own thinking about the implementation and then in meeting 2 which will be in the same week we will discuss which of the 2 ideas is more feasible and take the final decision.

Meeting 2 [ASH]
October 7th, 2022, 1:00PM

Time Keeping:

Everybody attended.

Meeting Notes:

- Topic decided to be "Smart Fridge"
- User Specs create (MoSCow drafted)
- Basic groups formed
- Initial Research Tasks for Groups laid out
- Next meeting (3rd) planned for Wednesday 12/10 at 14:00

Meeting 3 [IB]

October 12th, 2022, 2:00PM

Time Keeping:

- Everyone Turned Up(6 in person - 1 online (due to Covid)) in the maker space
- Meeting Lasted 1 Hour

Meeting Notes

- Group decided that esp module is cheapest and easiest to use.
- We decided to use raspberry pi to locally process data before sending to server.
- As a backup we decided that we would use a pre built barcode scanner if our esp/raspberry pi system were to fail.
- Isaac and Yohan will focus on the hardware of the project including the use of the esp microprocessor and the esp camera module. A switch will be used to trigger the camera and a buzzer will sound if the fridge opens too long. The photos will be sent to a raspberry pi to use opencv to detect the type of item(Barcode). The opencv/ raspberry pi part will be handled by Alfie.
- Alexandre will look into the server API aspect of the project.
- Hamzah will look into how to integrate app/website functionality.
- Meeting arranged for Wednesday October 19th .

Meeting 4 [HH]

October 17th, 2022, 2:00PM

Time Keeping:

Online meeting, all members present

Meeting lasted for 1 hour

Meeting Notes:

Discussed and reviewed Design Brief

Decided on the next step -

- Group decided to have another meeting this week to finalize the Design Brief before submission.
- Each member has their dedicated section, as stated in week 3 meeting.

Discussed current project status

Meeting 5 [AW]

October 26th, 2022, 1:00PM

Time Keeping:

Attendance: Everyone attended

Meeting Notes:

Discussed the report that was submitted on the 25th. Feedback will be received on Friday so we will have a meeting afterwards.

Discuss motherboard PCB to distribute power.

Weight sensor testing has begun.

OpenCV: Research still going. Looking into different approaches for OCR as well as bar code detection using OpenCV libraries. https://www.geeksforgeeks.org/text-detection-and-extraction-using-opencv-and-ocr/

Tasks for next week(lab) :

Working barcode scanner. Pi: Alfie Looking into barcode opencv.Alfie, Jamie, Ioanna. Ioanna looking into OCR.

PCB: Alex Layout: end of week 6. Order: end of week 7.

Box: Alex lasercut smaller version.

Github: Alex. Everyone add names to be added.

Yohan: Multi-Threading Sensors .

Isaac: Weight sensor calibration as well as image capture Hamzah: Help with hardware in labs.

Meeting 6 [AW]

November 3rd, 2022, 10:00AM

Time Keeping:

Everyone attended.

Decided next meeting to be Thursday at the lab 10AM.

Meeting Notes:

First lab session. Barcode detection working on raspberry pi.

ESP32 camera tested. Found to be too blurry. Decided on switching to a webcam connected to the pi. High quality camera allows for better Barcode detection and OCR.

Less work load on ESP frees space for other features.

Work continues on OCR as well as barcode detection.

Git hub will be made for the Pi

Meeting 7 [JG]

November 10th, 2022

Time Keeping:

Everyone attended

Meeting Notes

Went over what each team has done, what they are currently working on, and what they are yet to work on.

OpenCV have barcode and expiration date recognition working. They are continuing to work on product detection.

The Microcontroller team have the buzzer, code, Hal sensor, JSON and threading done as well as the hardware side of the scale. Apart from this they had also completed work for the ESP camera, however, this will no longer be used in the final product. They are continuing to work on the scale calibration, the buzzer and the LED lights.

The Pi team are continuing to work on receiving data from the microcontroller.

The web team have completed the backend, basic input/output, and sending data. They are continuing to work on the frontend and user verification. They are yet to begin populating the barcode database.

The PCB and casing need to be started.

We will begin bringing all sections together next week, setting a deadline to finish this in week 9.

Begun discussing how to split up the final report.

Meeting 8 [IP]

November 17th, 2022

Time Keeping:

Everyone attended in the lab.

Meeting Notes:

Discussion for deliverables for next week:

- Box
- Object recognition to integrate with character recognition for next lab
- Pi and microcontroller together
- Get started on report writing
- Complete the contribution table for next week and the layout

Went through layout of report and discussed splitting the sections that contribute to group work

Breakdown of Report in new document

Meeting 9 [IB]
November 24th, 2022, 12:00

Time Keeping:

Everyone attended

Meeting Notes:

Discussed PCB design submission.

Discussed Report Progress.

Agreed to complete individual report sections by 8th December

Discussion for deliverables for next week:

- Final Box Design.
- Object recognition to integrate with character recognition for next weeks lab.
- Pi and microcontroller integration.
- Integrate expiry date integration.
- Website demo

Meeting 10 [YJ]

Time Keeping:

Everybody Attended, Approximately 30 mins

Meeting Notes:

Goals for the day were discuessed.

Integrating**:** CV and Embedded

Box : waiting for PCB , change design as new material required @jamie and @ioanna

Hardware and Firmware Code (Git set up first PR created)

bugs to be fixed but otherwise working with pi

Pcb**:** Due in a few days

Next week @Alexandre @Yohan John @Isaac B @Alfie Walding meet to test the PCB and testing

CV : (No git has been set up)

Needs testing :

Object detection - As the current dataset is not the best

Text Recognition - Needs to be integrated as a repo and tested

Barcode Recogntion - Needs to be integreated as a repo and tested

Website: (NO git has been set up)

Recipe Generation : seems to work on its own need to test with integration.

Backend : Working

Frontend : Working

PLAN B: Veroboard is to be used if PCB fails to work

Time Keeping:

Everyone Present, Ioanna remote

Meeting Notes:

- Updates:
- Hardware ESP32: Switching board due to error Hall Effect
- Hardware LED: They need a lot of power (12V 2A)
- PCB: Active (power related) components missing
- PCB: ESP32 "new board" doesn't fit

Supa Base Project Key:

- [ ] Box Lines / Design - Jamie / Isaac
- [ ] Actually Cutting - ASH
- [ ] Power - Workaround - ASH
- [ ] Power - Foundations if the parts arrive
- [ ] RPI main loop - Alfie
- [ ] RPI Get Barcode - ASH
- [ ] RPI Sent Item - ASH
- [ ] Display on Website - Hamza
- [ ] Send from Website - Hamza
- [ ] Checking Comms Port - Yohan
- [ ] Code ESP Testing - Yohan
- [ ] Adapter Board – Yohan

Meeting 12 [YJ]

December 12th, 2022

Time Keeping:

@Hamzah is absent

Meeting Notes

- App has been made - @Alexandre
- A working project is to be made with the product today with @Yohan John @Isaac B @Alexandre
- @Alfie Walding working on the clean up of the software according to the software design
- Report - Group work discussion next week revision : 1

Meeting 13 [ASH]

December 19th, 2022

Time Keeping:

Every one present

Meeting Notes

- Everyone to add their section to Teams
- Alfie and Alexandre to compile in Word
- Will send out to-do list
- Alexandre to set-up Latex Formatting by end of Week
- Planned First Presentation Meeting in New Year