



Green Smart Gardening Systems

Winter Midterm Progress Report

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Progress Report

- Purpose of this Document
- Audience



Brandon Ellis

Sensors, Board Logic

- My Work
- Winter Break
- Week 1 – 6
- Future Work



Winter Break

TA Meeting

- N/A

Client Meeting

- Touched Base Prior to Break
- Confirmed Component Shipment

Work Addressed

- MKR1000
- Sensor Setup
- Libraries



Week 1

TA Meeting

- N/A

Client Meeting

- Recap
- Break Report
- Schedule

Work Addressed

- BME280 Testing



Week 2

TA Meeting

- First Meeting

Client Meeting

- BME280 Pictures
- SD Card Reader

Work Addressed

- BME280 Testing



Week 3

TA Meeting

- Schedule

Client Meeting

- Valid Wiring
- SPI vs I2C
- Design Doc
- Intel Logo

Work Addressed

- BME280 Pictures
- Schedule
- SD Card Research



Week 4

TA Meeting

- Database Connection

Client Meeting

- Update on BME280
- Database Connection

Work Addressed



Week 5

TA Meeting

- Database Connection

Client Meeting

- Confirmed Database Connection
- MKR1000 Logic

Work Addressed

- Database Connection
- Poster Rough Draft



Week 6

TA Meeting

- Alpha Version

Client Meeting

- Components

Work Addressed

- Pitching Practice
- Core Logic
- Report



Future Work

Work to Do

- Board Logic
- Soil Sensor Hookup
- Database



Jiayu Han

Wi-Fi, Power, Packaging

- My Sections
- Week 1 – 6
- Future Work



Week 1

TA Meeting

- N/A

Client Meeting

- Recap
- Break Report
- Schedule

Work Addressed

- MKR1000 setup



Week 2

TA Meeting

- First Meeting missed

Client Meeting

- Wi-Fi connection

Work Addressed

- Wi-Fi scanning code
- Learning Arduino IDE and MKR1000



Week 3

TA Meeting

- Schedule

Client Meeting

- Wi-Fi Connected
- Design Doc
- Intel Logo

Work Addressed

- Wi-Fi Connection
- Schedule
- Start on Power Section



Week 4

TA Meeting

- Having a demo for TA next week

Client Meeting

- Missed Client meeting
- Start Working on Packaging After Week 5

Work Addressed

- Upload the Wi-Fi section to Github
- MKR1000 Undetectable
- Power section Research



Week 5

TA Meeting

- Database Connection

Client Meeting

- Power Section Confirmed

Work Addressed

- Start Working on Packaging
- Learning Sketchup
- Poster Rough Draft



Week 6

TA Meeting

- Alpha Version

Client Meeting

- Components Shopping List
- Packaging Rough Draft Before Week 7

Work Addressed

- Pitching Practice
- Packaging Rough Draft
- Check out AutoCAD Inventor
- Report



Future Work

Work to Do

- Packaging Design
- Power Section Test
- 3D Print



Jack Neff

Front-end and database design

- Week 1 – 6
- Future Work



Week 1

TA Meeting

- Met with Dan, briefly touched base about everything.

Client Meeting

- Touched base. Clients told us to get acquainted with the software/hardware we would be using in the next few weeks

Work Addressed

- Began learning how to use Google Cloud Platform.
- Deployed first VM



Week 2

TA Meeting

- Dan made sure everything was ok within our group, and they we were all still committed to the final product.

Client Meeting

- Clients gave me my first real milestone: to have the database configured, connected, and displaying sample data on a PHP page within the next few weeks.

Work Addressed

- Set up first version of database
- Launched LAMP on VM



Week 3

TA Meeting

- Discussed the milestones we were given in the last client meeting with Dan. He agreed they seemed reasonable.

Client Meeting

- I didn't have much to contribute in this meeting. I was still working on the database, but I gave the clients a progress report.

Work Addressed

- Figured out upload/download from VM
- Reconfigured database on LAMP stack



Week 4

TA Meeting

- Touched base with Dan. I was almost done with the database, and he approved of my progress.

Client Meeting

- The clients were happy to hear I had finished the initial goal set out for me. They said the next thing to do was to send data from the microcontroller all the way to the database. This would be a joint task for myself and Brandon.

Work Addressed

- Tested PHP pages hosted on our server
- Connected PHP pages with database
- Displayed dummy data on PHP page
- First milestone complete!



Week 5

TA Meeting

- Asked Dan about how to move data from microcontroller to database. He concurred with us that a POST request was a good idea.

Client Meeting

- Finished the data display just before the meeting. Clients were happy about our progress. They assigned my next goal of using the d3.js library to display dummy data in some interesting ways.

Work Addressed

- Transferred data from microcontroller to database successfully
- Brought up vineyard visit idea
- Started working on graphical data display



Week 6

TA Meeting

- Dan reminded us all about the chaos that inevitable ensues in weeks 8, 9, and 10, and advised us to get as much work done as possible before then.

Client Meeting

- Only one client was at the meeting this week. I had finished some preliminary data display, but I was still working on making it better. Talked about a possible vineyard visit, but scheduling it was difficult.

Work Addressed

- Did some preliminary data display with d3.js
- Streamlined file transfer between local machine and VM



Future Work

- Finish data display
- Increase security
- Iteratively design web page
- User test cases
- (Possible) Data analysis