Meeting Summaries / Agenda

CPRE / SE / CYBE / EE: 492 - Bi-Weekly Report #1

Student Meeting (1/22/24):

Attendance: Andres Ceballos, Ben Gardner, Casey Halbmaier, Coby Konkol
Missing: Nihaal Zaheer (co-op absence), Caden Backen (illness-related absence)

Discussed priorities and short and long-term scheduling.

Meeting Agenda:

- 491 Review (What did we accomplish? What did we learn? What next steps are we planning?)
- GitHub Organization:
    - How do we plan on organizing it?
    - When will we establish a workspace?
- Team Processes
- Re-Establish Group Tasks
    - Questions about what everyone is doing?
- Establish Due Dates for the Semester:
    - When will tasks be due?
    - When will we send a device to VetDogs?
    - How long will everything take?
    - Is this manageable?
- Closing
    - Questions?

Scheduling Future Meetings in short term:
Scheduled future recurring meeting times. Meet with faculty advisor every other week on Mondays from 2 - 3 PM, using off weeks to meet with just the team. Nihaal Zaheer and Caden Backen will always have to miss these meetings, but the chosen time slot has the best overlap with advisor availability given the team's schedules.

Wednesdays will be used for team members to meet and check in on their progress. These meetings will be held from 12:15 - 1 PM.

Overall, team availability is most open on Mondays, Wednesdays and Fridays. Due to Nihaal Zaheer's co-op, he will not be present for the majority of meetings which is something he has discussed with the professor of the course. Friday evenings from 5 - 6 PM has everyone, including Nihaal, available if a meeting is needed.

- In summary:
    - Mondays: 2 - 3 PM (With faculty advisor, every other week)
    - Wednesdays: 12:15 - 1:15 PM (Team progress check-in)
    - Fridays: 5 - 6 PM (Team meeting to catch Nihaal up)

In addition, we will meet with America's VetDogs every other Friday from 2 - 3 PM. This time slot was made last semester, so a schedule change is needed to accommodate for the team's new class schedule.

- Individual meetings this week:
    - Ben, Coby, Andres: Meet to work on hardware this week on Tuesday at 2:30 PM

Long term priorities and scheduling:
Broad Scope:
Week 2 -> Touching base, starting plans, starting hardware work.
Week 3 -> Putting those plans together to create the device.
Week 4 -> Get the device sent to VetDogs

Refined Scope:
Week 2 Hardware: First, prototype circuits for MAX and SD card.
Week 2-3 Software: Read sensor, write SD card, setup Pico code project, integration of different parts
Week 3-4 Hardware: Second: Prototype with both MAX and SD card, wearable prototype
Week 3-4 Software: Fixing code, finalizing for sending out first iteration, send out device

Next-step "features":

- Algorithm design/integration
- Dog Vest device
- Radio communication/notifications to device
- Potential phone application?

GitLab Organization:

Gitflow Development Approach

- Branch Practices:
    - Branch name = Gitlab issue name/number
    - Branch from master
    - 1 approval from another team member, specific, descriptive summary on merge request. Links to any relevant documentation, and a summary of how the branch meets the requirements.
- Code/Design Practices
    - Descriptive, detailed comments on any work.
- Folders:
    - Wearable
        - Hardware
        - Software
    - Dog Vest
        - Hardware
        - Software
    - Phone Application

(Use the Technical Documentation folder on the team's Google Drive for interface definitions, technical resources, tutorials, links.)

Discussed Project Management Organization/Direction:

- Continue to loosely follow Agile ideals/methods.
- Minimum weekly check-in and task orientation. (This will be done on Mondays during the Monday meeting time.)
- Continue to line up priorities with class bi-weekly report deadlines and bi-weekly advisor meetings.

To summarize: Bi-weekly "sprints" with weekly task commitments

Student Meeting (1/24/24):

Attendance: Andres Ceballos, Ben Gardner, Casey Halbmaier, Coby Konkol

Missing: Nihaal Zaheer (co-op absence), Caden Backen (illness-related absence)

Meeting Agenda:
- Updates on what has been accomplished since last check-in, any new blocking problems? (10 min)
- Deadlines/times for the next week (5 minutes)
- What are we working on until the next check-in? (10 minutes)
- How can we address blockers?

Meeting Notes:
- What has been done:
  - Went through hardware specifications, ran into prototyping issues.
  - Team organization for the Spring semester has been established.
- Weekly Tasks:
  - PCB Design: Ben, Andres and Coby
  - Reading through SPI/SD Card Files: Casey
  - Digging in the ESP to find out the code structure and operating system: Nihaal
  - Reading the MAX datasheet to understand set-up and how to read from it: Caden

Advisor Meeting (1/29/24):

Attendance: Rachel Shannon, Casey Halbmaier, Andres Ceballos, Ben Gardner, Coby Konkol

Missing: Caden Backen (class absence), Nihaal Zaheer (co-op absence)

Notes:
- Catch-Up with Rachel Shannon
  - Team skills review
  - Soldering issues: Too small of parts to hand-solder
    - Contact has been made to find work-arounds to this issue.

- - - ■ Lee Harker in the ETG for PCB services
    - ○ Obtaining a VetDogs vest?
      - ■ Send them an address to deliver to.
    - ○ Find other ways to collect data on PTSD.
      - ■ The Des Moines Vet Center, Rachel is a patient there.
    - ○ Time crunches:
      - ■ Need to create the physical hardware soon, but need to get ahead on the SD card reading so that the team isn't overwhelmed when the physical hardware is complete.

Action Plans:
- Get the schematic completed!
  - ○ Coby, Ben and Andres can then work together on the PCB design.
  - ○ Have the schematic done by Wednesday.
- Continue individual research on SD Card/PSI.
- Create a questionnaire for veterans from the Des Moines Vet Center to send to them.

Industry Sponsors (BAE/Vetdogs) Meeting:

Attendance: Mike Devlin, Mike Goderre, Coby Konkel

Missing: Casey Halbmaier (class absence), Caden Backen (class absence), Nihaal Zaheer (co-op absence), Ben Gardner (out of town for funeral), Andres Ceballos (class absence)

Meeting Notes:
- **Design Review:**
  - ○ They are on board with us sending them a device for data collection. They will need to try to find a volunteer who still has periods where they feel stressed/triggered.
  - ○ We should collect control data (outside stressful situations), data in stressful circumstances/triggered, and data from when they conduct exercise or a different activity that elevates their heart rate.
- **Objectives/Requirements Review:**
  - ○ Data collection and our device's first iteration is our highest priority right now. It will take time to collect data since many of Vetdogs correspondence is with veterans who have been working on mitigation for years.
  - ○ Second iteration + vest device + starting work on the algorithm

- Interface with veteran, growing/developing algorithm/prediction, and semi-finished device.
- It was emphasized that the device should be able to be turned off/on.