CAE Research Project Meeting Minutes
9-16-2022

- Participants
  - Dr. Waleed Farag (PI)
  - Dr. Soundararajan Ezekiel (Co-PI)
  - Dr. Xin-Wen Wu
  - Dr. Jino Ramsen
  - Meghan Schlipp
  - Emily Himes
  - Zachary Keyser
  - Nathan Metzger
  - Drew Rado
  - Sky Semone
  - Zaryn Good
  - Maria Balega
  - Hector Linarez

- Meeting started at 6:00 pm
- Unanimously approved minutes for meeting on September 9th, 2022

Main Points:
- Started meeting with reporting on progress
  - Drew discussed the combined ThingsBoard dashboard
    - Sky provided a live demonstration to prove that sensors
    - Internet issues were resolved and approved by IT while Sky/Drew/Emily were in the room. We expect no more issues. We had one approved router that could work, mapped the correct MAC address solved the issues.
  - Dr. Ramson talked next: “great job”
    - Now that all sensors are connected, move on to grouping sensors by function
    - Create a dashboard for each use case: these were discussed in previous weeks
    - Move on to ThingsBoard professional: more control and ability to download data.
      - Drew confirmed that downloading data requires Professional version.
      - Confirmed intensions that downloaded data will be needed for ML algorithms that were created in the
      - Dr. Farag mentioned using a second dashboard for the “seconds” of each sensor and place it in a different location.
  - Dr. Farag stressed that we need to start aggregating data, TB Maker subscription should be purchased immediately.
  - Dr. Wu wanted to make sure that the data was synchronized properly for all devices. Network parameters should also be recorded in the final dataset.
  - Dr. Ramson asked about custom packets of data.
  - Dr. Wu mentioned that the first part of the project had labelled anomalous/non-anomalous data and this should be considered when collecting data
  - Dr. Farag mentioned that we might not need all of the sensors hooked up.
    - RGB, ECG, water quality may not be relevant.
    - Dr. Ezekiel suggested focusing on only the necessary sensors that may be relevant to the “smart-home” model that the project
Temp, humidity, sound, air quality were determined to be the most critical.

Agreed that we should get more boards: Dr. Ramson suggested getting 5 more for developing. Sky will purchase these on Amazon.

Tasks:
  - Maria and Zaryn
    - Start assembling the new IoT data to get something like the old IoT data. Can our data be preprocessed? How?
    - Get CSV files and be able to use it for past algorithms
  - Emily and Megan:
    - Investigate ThingsBoard capabilities.
    - Help Sky program the Arduino.
  - Drew, Sky, Nate
    - Hook up the rest of the boards using the new configurations
    - Make better ThingsBoard Dashboards.
  - Hector and Zach
    - Help out with TB and programming.
  - Megan
    - Worked on getting recommended software to work: more research into this.
    - Getting started on Titan.
  - EVERYONE:
    - Be in communication with Dr. Ramson for additional information and tasks.

Adjournment at 7:22
Next meeting will be held on Friday, September 23, at 6:00 pm