

# 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 intentions 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 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