EE / CprE / SE 491 – sddec19-03
GoMe
Week 6 Report

3/15/19 – 4/05/19
Client: General Public
Faculty Advisor: Goce Trajcevski

Team Members
Michael Arnold - Chief Engineer
Jacob Montgomery - Lead UI
Jaclyn Ralfs - Data Analytics/Scribe
Akaash Suresh - Engineer/AI Tech
Mark Marrano - Systems Engineer/Requirements Analysis
Bailey Jensen - Lead Back End/AI Tech

Past Week Accomplishments
- Everyone - Worked on design document
- Further discussed in our groups -- Akaash and Bailey: A.I., Jake and Mark: System Design, Mike and Jaclyn: Data Analysis.
- Set up Fitbit to determine what data can be imported from it - Michael & Jaclyn
- Worked out bugs in the location tracking process currently implemented - Michael
- Further discussed the differences between the Firebase Realtime Database and Firestore, and how we plan on utilizing both - Mark and Jake
- Planned on development to be done during Spring Break - Michael
    - I will be in ames over spring break working on the iteration goals for the current iteration. In the weekly meeting I will be talking to each one of the teams to understand how I need to make the features and collect data to ensure it can be easily integrated with our systems and AI as well as easily scalable to large amounts of data.
- Prepared and demonstrated prototype of ML to faculty advisor - Akaash & Bailey
- Compositie Events Research - Jake and Mark
- Migration from firebase DB to Cloud Firestore
- Planning how we will store and adjust events that have not occured yet
  Progress plans for data collection of the app and make sure to implement abstract interface design methods for implementing the APIs- Michael
    - Location

- ○ Sleep
  - ■ FitBit
- ○ Tasks
  - ■ Canvas
  - ■ Google Calendar
  - ■ Outlook

- ○ Events
  - ■ Facebook API
- ● Development progress, including version upgrades and firestore integration

Pending Issues
Determining every single different point of data we will need to collect and where it will be stored has been more difficult for us than we originally thought. We believe that once we get to the point where we are collecting the application, we will have an easier time determining exactly what we need to do with the data. We plan on having data collection working by the end of Week 6 report (4/5/19).
Update: We are still working on data collection finalizations however we have made a lot of progress

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Michael Arnold	Worked on the design document. Implemented fitbit api, google calendar api, smoothed out location tracking process, facebook event integration	25	52
Jacob Montgomery	Design Document, firestore research, Composite event readings, began firestore integration and migration from firebase RTDB	9	34
Bailey Jensen	Used Keras to build some example models and get a deeper understanding of how machine learning models are implemented.	8	30

Jaclyn Ralfs	Design document, working with external data sources being used in app	3	24
Akaash Suresh	Rewrote the ML code using Keras API. Got tolerances down too roughly 2 minute accuracy with some training data. Worked on trying to create best neural net for the data	15	50
Mark Marrano	Design document, refining testing plan, started development work including firestore integration	10	34

Plans for Coming Week

- Begin merging AI with Data Collection - Michael, Jaclyn, Akaash, Bailey
  - Now that we have our data collected we can begin picking out the specific data points we need to feed to our AI and then begin feeding it to our AI.
- Continue working with Canvas to get a developer key for our application and get it integrated into our app- Michael
- Apply streaming and database techniques to our data collection and begin storing tracking and sleep data - Michael, Jake, Mark
- Finish migration from Firebase DB to cloud firestore
- Make the data collection of our APIs a streamlined process - Michael
  - Create a welcome page that allows user to easily connect to our APIs and select the accounts that they want to pull the data from
  - Also determine what starting data we need from user