

**EE / CprE / SE 492 – sddec19-03**

**GoMe**

**Bi Weekly Report 13**

10/11/19 - 10/25/19

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

### **Accomplishments of the past two weeks**

- Finished the location verification service - Michael and Bailey
  - This is a service that recognizes when the user leaves, arrives or is currently at an activity in their schedule. This sets us up for the triggering of changes to the schedule based on the users ELO score.
- Implementation of the dynamic schedule, specifically one that changes due to a certain trigger in your activity - Jake and Mike
- Implementation of generating and searching for priorities in the user's schedule by using a variation of the 0/1 Knapsack problem algorithm - mike and Jake
- Began implementing an analyzation of the schedule to understand where the weakness/strengths in the users schedule are, so we can begin giving feedback and making adjustments to their schedule - Michael
- Researched and started designing potential ways to visualize data for the user to see - Mark/Jaclyn
- Updated UI for user profile page - Jake
- Connected Firebase storage for uploading and pulling profile images
- Code Cleanup - Mark
- Started implementing features for users to create tasks by using a polymorphic object, splitting User Tasks into dated and undated task objects. - Jake
- Updated the schedule page UI so it has an attractive look - Jake
- The ML model is getting better at fitting to the data that we give it, and giving accurate results from sample data we give it. - Akaash

## Pending Issues

- Going to need to regression test a lot of the features being added in currently, once the AI is completed.

## Individual Contributions

Team Member	Contribution	Hours	Total Hours
Michael Arnold	Worked on implementing the schedule to update/balance a users life for them. Met several times with group members to plan the best way to do this. Began creating a service that accesses the users schedule	20	165
Jacob Montgomery	Build in Priority objects for the user, and a Knapsack algorithm for finding them based on a time constraint, allowing for dynamic schedule re-population based on the user's strengths and weaknesses. Updated the profile page UI, connected firebase storage for image upload/download, began implementing user tasks into the app.	25	115
Bailey Jensen	Implementing ability to calculate travel time between locations and building functionality to alert users when they won't be able to travel to their next event on time. Continuing to improve event service and location verification service.	14	88
Jaclyn Ralfs	Worked on "Daily Report" graphs for user's to view data and additional info about their schedule	8	64
Akaash Suresh	Worked on creating a microservice that creates a bridge between ML and application.	5	88
Mark Marrano	Working on code cleanup and planning implementations. Working on a central database calling location.	17	85

## Plans for the Next Two Weeks

- Continue 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 on the following services to understand the ELO score - Mike, Jake, Bailey
  - A service that understands the users elo score and makes updates to the schedule accordingly
  - A service called the feedBackService that understands the users elo score and gives feedback to the user on how they are performing -- an AI-like “app-voice” parent/mentor feeling to it
  - A service that analyzes the users elo score and creates charts and other analysis for the users
- Create a service to traverse activities in the DB and choose recommended activities for the user - Jake, Mike
- Implement some data visualization for the AI to use when the AI is built: Mark/Jaclyn
- Finish implementing User Tasks and incorporate that into priority algorithm so we can show them in our schedule. - Jake, Mike
- Find a way to continuously log the user’s activity throughout the day and how it affects their Life Score - Mike
- Code cleanup - Mark
- Fully implement sleep prediction and pass data through a python endpoint.