EE/CprE/SE 491 WEEKLY REPORT 1

2/4 – 2/18

Group number: 34

Project title: Semantic Visit Aware Recommendation of Hotels

Client &/Advisor: Goce Trajcevski

Team Members/Role:

Dylan Hampton – Frontend
Zachary Garwood – Backend
Thomas Frohwein - Frontend
Britney Yu — Backend
Joe Zuber – Backend
Nathan Schenck – Frontend
Kevin Knack – Backend

Weekly Summary

For the past couple of weeks, the frontend's objective was to develop a skeleton of the website so we could have an outline as to what would be needed when we connect the frontend to the backend. We also wanted to start implementing MapBox into the website so we could have an idea as to what the map would look like. We also started researching more into how MapBox works with different inputs so we know what inputs are required to generate the routes we need for our algorithms to display on the page. For the backend objectives, we wanted to get the virtual machine configured to allow for a Flask application to run, make sure everyone had a local environment set up that they could use to run our client's code, and work to understand the given code, so that we could ask any needed questions in our next meeting with our client. As for changes made to the backend, we started out using Spring Boot and decided that Flask would better fit our needs when working with our client's code, so we made that migration.

Past week accomplishments

Zachary Garwood: Worked on setting up a local environment and environment on the server to run the Python code that was given to our team by our client/advisor. Migrated over to Flask from Spring Boot, and set up our virtual machine with an Apache server alongside WSGI

to allow for Flask to function with the web server. Began working on the CI/CD for our backend and have it nearly completed.

Dylan Hampton: Worked on implementing part of the front end user interface. Met with other front end team members to establish team roles as well as write user stories for the front end. For the implementation of the front end, created React components for user submission button, city selection dropdown, and types of PoI input. Also, helped to style the user interface to ensure good usability and interactability. Started on researching the MapBox API.

Nathan Schenck: Worked on implementing the design of the front end user interface. Met with other team members who are also working on the front end to distinguish roles and goals within the team. Set up continuous deployment to the team web server, so the server always displays the most up to date user interface implementation.

Within the front-end implementation, created React components for the advanced settings, generated route frame, base of our MapBox, and the interactable PoI list items. Also, styled the user interface and ensured it is interactable before we can add data handling and processing.

Thomas Frohwein: Worked on implementing pieces of the skeleton of the website. Completed the skeleton of the submission frame where users will enter various information like the city, points of interest, and the maximum distance from the hotel the user is willing to travel. Met with front end developers to discuss work completed and future work needed to accomplish goals.

Britney Yu: Worked on figuring out how path data is formatted from the algorithms but it was difficult to understand how the algorithms all worked together. Met with the back end to discuss a change from spring boot to flask as well and created a few more cards to do on our trello tasks. I had also set up the code on my local environment to test the code that was currently on GitHub and installed the necessary dependencies.

Joe Zuber: Set an endpoint and played with Springboot before we decided to migrate to flask. Met with the back end where we discussed getting the python code working and switching to flask. Was able to install necessary dependencies for the algorithm code. Talked about setting up a meeting with Xu, because of issues with getting the algorithm code working.

Kevin Knack: Starting learning more about Springboot before switching to flask. Met with the back end to talk about switching to flask and to begin understanding how we can use the code provided to us by our client. Got Python code provided to us by our client to run locally. Started examining the Python code to understand it better.

Pending issues

Backend: Need to meet with Xu to discuss algorithms to gain a clearer understanding of what these are intended to do and how we can implement this to our website.

Zachary Garwood: Permission issues with the GitLab runner when copying over files to the VM and also with restarting Apache.

Individual contributions

NAME	Individual Contributions	Hours this week	Hours cumulative
Thomas Frohwein	Created the skeleton for the submission frame and points of interest components. Also, created a component for the recommended hotels frame.	6	14
Nathan Schenck	Set up continuous deployment for the web server. Created React components for the advanced settings, generated route frame, MapBox base, and PoI list item. Styled components and ensured proper interactions.	*6*	*16*
Dylan Hampton	Created user stories, user submission button, city drop down input, and types of PoI input.	6	14
Zachary Garwood	Configuration of environment and web server on VM to run Flask, backend CI/CD	*6*	*15*
Joe Zuber	Set up local environment to test and understand Python code	3	10
Britney Yu	Set up local environment to test and understand Python code and tested an end point	4	11
Kevin Knack	*Set up local environment to test and understand python code*	*3*	*10*

Plans for the upcoming week

Zachary Garwood: Continue working on the backend CI/CD as well as working to understand the client's code. Work on creating endpoints to provide the frontend with information on points of interest, locations of hotels, and test routes that they could use to begin the MapBox visualizations.

Thomas Frohwein: Continue researching MapBox API and how we can potentially generate routes with information given by the user and with algorithms developed for us by the client. Begin to integrate the backend with the frontend so we can communicate with the server.

Nathan Schenck: Continue working on front-end implementation through work tickets we have created on our project management board. Work will be focused on beginning to package all the data needed for input submission to be ready to send to the backend. Possible work may also be creating mock loading for pulling data from the backend on page load, so we can have the components ready.

Dylan Hampton: Continue research on MapBox API to better understand how to integrate user data and client's algorithms to generate routes within MapBox. Work with the front end team to begin integrating the front end with the back end server. Continue to work on and create user stories.

Joe Zuber: Gain a better understanding of the Python code and plan a meeting with Xu. Research GeoJSON and figure out how to use the Python code to export to that format. Help Thomas with CI/CD, and help get Flask set up as well as learn how to use it.

Britney Yu: Meet with Xu to understand the algorithms better so we can start using it with our site. Learn python syntax to be able to code with python on the backend. Create some more endpoints so we can provide the frontend with data to work with.

Kevin Knack: Learn about the Python code and meet with Xu to get a much better understanding of how we can actually get the code working. Learn more about flask and python in general. Start creating endpoints so the frontend and backend can start to see how they should send data back and forth.

Summary of weekly advisor meeting

When we met with our advisor at the start of the reporting period, he was able to give us guidance on how we can structure our teams to work effectively, and wanted us to have our tools and frameworks finalized for our next meeting. Conversations were had with our advisor about a meeting with the graduate student that created the algorithms we are using in our project, and the scheduling for that meeting is still in the works.