3/25 – 4/7

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

In the last two weeks, to start, the front-end team finished the functionality of submitting input and receiving a response from the backend containing all the information needed to draw the routes. With that response the front-end team has been able to begin and almost finish map visualization. All in these last 2 weeks, the map now draws custom markers for hotels that, when clicked, toggle the visibility of that hotel's designated points of interest and the route to those points of interest. Alongside this map visualization, a results list is populated which controls and reflects the map contents including the hotels, their route distance, and any visible routes and their PoIs.

The past two weeks, the back-end team has been working on various issues that the frontend has asked us to take a look at. We split up our project structure into multiple files, fixed several bugs, and updated parts of our clients code. We added addresses to PoIs that did not have them specified, and now only run the algorithm setup on the first call to the backend, speeding up later response times dramatically.

Past week accomplishments

Zachary Garwood: Created a new data set for Chicago. This involved updating TripAdvisor web crawlers provided to us as they were out of date. Running these crawlers scraped PoI information such as addresses and reviews for the attractions. This information was then used alongside a csv containing AirBnBs in Chicago (hotels/origins) to create the PoI network, matrix container, and other data structures needed by the algorithms. Remade the NYC PoI network and matrix container as they were out of sync with one another, which fixed an issue with origins not being mapped to the correct latitude and longitude. Fixed test cases for the updated NYC dataset. Fixed an index error when 6 or more PoIs were selected for a single category, and made it so the route response orders PoIs correctly.

Dylan Hampton: Worked on handling the response data from the backend api so that it is stored in a useful manner. Got routes to be generated with the correct routing lines and points of interest. Also added a feature to hide the routes when clicking on an already expanded route. Styled routes and PoI nodes to be easier to see, more visually appealing, and easier to use. Added functionality for moving the map view to zoom and move to origin nodes when drawn and when routes are clicked on. Helped with functionality on displaying the names of multiple PoI that are located at the same longitude and latitude.

Nathan Schenck: Worked with submitting the input from the special point of interest dropdown list. Created functions to make the map draw markers and lines based on given coordinates, and got the app to call these functions to draw the hotel markers on the response from the backend. Created the list items to be displayed in the results list including the hotel information and PoI information. Implemented the results list functionality that allows the user to control and view the map through the list.

Thomas Frohwein: Completed Redux implementation into the source code to be able to control and access the state from multiple different React components and the map. Successfully used the state to store user input and used the inputted data to retrieve a generated route from the python backend that holds the algorithms and city data.

Britney Yu: Created the mapping_package folder to separate the main app (App.py) from the modules that involved mapping. Moved a few of the functions into the result file. Tested our site to see the capabilities of what we have so far. Since our gitlab did not have a ReadMe, I decided to update it so we can start adding more to it as we finalize our project.

Joe Zuber: Continued to refactor code. Helped Kevin with fixing the multiple nodes having the same lat/long issue. Moved setup to a new function, which is only called on the first request to the backend. Made code more city independent and wrote the necessary code to add Chicago as a new city.

Kevin Knack: Added addresses to New York poi file to fix certain pois not having the correct latitude and longitude. Started adding test cases for individual functions on the backend side.

<u>Pending issues</u>
- Some backend merge requests need to be looked at and approved.

Individual contributions

NAME	Individual Contributions	Hours this week	Hours cumulative
Thomas Frohwein	Completed Redux implementation into codebase to store user input in multiple slices and allow React components and the map to store and access data.	12	40
Nathan Schenck	Implemented functionality to submit input from the dropdown list, draw markers and lines on the map, and display hotel and PoI information in the results list. Also added functionality for controlling and viewing the map through the list.	*8*	*55*
Dylan Hampton	Helped manage and store api responses. Got route lines and PoI to be drawn when an origin is clicked on. Added functionality to hide a route when clicked on again. Added zoom functionality for origin and route generation.	8	54
Zachary Garwood	Created Chicago data set. Rebuilt parts of NYC data set fixing origin lat,lng mapping issue. Updated test cases for new data. Fixed error with 6 or more PoIs in one category, and ordered PoIs in route response.	*8*	*59*
Joe Zuber	Backend code refactoring, making the code city-independent, helping Kevin to fix issues with the data, creating setup function and getting it called at first request, adding Chicago functionality	14	38
Britney Yu	Created a package for the mapping modules to make the Backend's code more readable. Created and added to ReadMe for our repository.	8	35
Kevin Knack	Added addresses to NY POI file. Added test cases for individual backend functions	*8*	*33*

Plans for the upcoming week

       Zachary Garwood: Clean up the code in the back-end and add more formal documentation for the endpoints and project setup. Implement any additions or changes wanted by our client after our upcoming meeting. Add more test cases once everything else is done.

       Thomas Frohwein: Work on completing the code with the map and take feedback from the client to make whatever changes are needed to start finalizing the project and begin preparing our final presentation.

       Nathan Schenck: Meet with our client and use feedback to make final changes to the design. Work with other front-end members to finish the current tasks on the task board which include finishing touches on the results list and testing.

       Dylan Hampton: Work on creating a dynamic unit of distance for the maximum distance input instead of statically using miles. Help other frontend members implement any changes requested by the client after our next meeting. Look into developing test cases for components which currently have a low test coverage.

       Joe Zuber: Continue to improve code readability with comments, inspect ways of running setup only for a specific city independently when that city is needed. Review merge requests. Help with any other issues Frontend may encounter with Backend.

       Britney Yu: My plans for the upcoming week is to create some tests to figure out how to set our POI's categories more accurately. I'll continue to help keep the code organized and see what our client would like to do in our next meeting.

       Kevin Knack: Add more test cases for backend functions. Look more into issues with POI categories. See what changes our client wants us to make and help to implement those. Try to help with any problems the frontend is having.

<u>Summary of weekly advisor meeting</u>

We met with our advisor briefly and he was able to give us guidance on how to start preparing and working on the final project document, poster, and final presentation in the coming weeks prior to the end of the semester.