

EE/CprE/SE 491 - sdmay23-35
Learning the Popularity Prediction in Information Cascades
BiWeekly Report #1
2/1/23 – 2/18/23
Client & Advisor: Goce Trajcevski

Team Members/Role:

Bailey Gorlewski, Frontend - Mapbox and ML
Evan Gossling, Frontend - UI/UX and Framework
Ian Johnson, Frontend - Design and Functionality
Paul Brinkmann, Backend - MySQL and Database
Will Postler, Backend - Integration between frontend and backend

Weekly Summary:

Over the past week, our team developed fundamentals of our website infrastructure and worked on getting the tools needed for the backend models. The website was set up with a few basic screens showing the geolocation data of a few test locations using Mapbox. We also got guidance on the backend structure, and experimented with ML models that we will be implementing. It should also be noted that Paul was sick for a period of time and therefore unable to contribute as much this week.

Past Week Accomplishments:

Everyone set up and established a connection to our Git repository as well as their virtual environment to develop on. Evan worked on creating our base website using flask and establishing a mapbox connection for geolocation capabilities. Bailey worked on the website cleaning up some UI and integrating the mapbox functionality into the website. Ian experimented with some ML models for our team, and tested the mapbox location-to-coordinates query system.

Our team met with one of Ce Le (one of our advisors' graduate students) who is very familiar with machine learning and the data sets we will be using. The meeting allowed us to get access to the data sets and begin establishing the design and inputs needed for the ML model we will be using. We will be using a somewhat generic/templated model but will still need to cater some aspects to our specific project.

- Bailey: Customization of the Mapbox within the page, creating a point placement system. Implemented a basic filter dropdown.
- Evan: Setup the framework using Flask and created a basic home page as well as a basic implementation of a map using Mapbox. This will be used for data visualization later. Created and styled basic navbar for website.
- Ian: Experimented with some ML models for our team, and tested the mapbox location-to-coordinates query system.
- Will: Set up meetings with graduate students, and set up an alternate Mac environment for Will and Paul.

Individual Contributions:

| <u>Name</u> | <u>Individual Contributions</u> | <u>Hours this week</u> | <u>Hours cumulative</u> |
|--------------------|--|-------------------------------|--------------------------------|
| Bailey Gorlewski | Did the mapbox functionality. Creating the project and designing the specifications for our project | 8 | 11 |
| Evan Gossling | Framework implementation. Integrated mapbox into the website. Worked on the UI of the website. | 8 | 11 |
| Ian Johnson | Experimented with some mapbox queries needed for the project (i.e. Name of location to coordinates.) | 6 | 9 |
| Paul Brinkmann | Attended team meetings | 3 | 4 |
| Will Postler | Established meetings with the Advisor and graduate student. Creation of Mac env (for Will & Paul) | 3 | 5 |

Plans for Coming Week:

For next week our team plans to establish the exact ML model we will be using based on the data sets we received. We also plan to implement the model on the backend along with the datasets.

- Bailey: Will look into filtering within Mapbox (over time/by region/etc). Working on more in-depth point placement with customization.
- Evan: Will look into integrating a database within the Flask framework.
- Ian: Advance UI to better support model inputs, and include more pages that the user can navigate.
- Will: Get a server with a Nvidia card for our database and ML needs from ETG.
- Paul/Will: Will also work on setting up a database so we can test connectivity with the website/framework.