

EE/CprE/SE 492 - sdmay23-35

Learning the Popularity Prediction in Information Cascades

BiWeekly Report #4

3/24/23 - 4/7/23

Client & Advisor: Goce Trajcevski

Team Members/Role:

Bailey Gorlewski, Frontend - Mapbox and DevOps (CI/CD)

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:

While we continue to get the model working on the server, we have improved the website functions and design. We implemented more server side requests into our website, and we now populate our "Paper Select" dropdown with papers from the APS dataset stored on our server. Once the query is sent to the server, it now executes a command on the server using the respective input parameters. The output of the command is then sent back to the framework. We also retrieve the affiliated universities of the original authors and then send that to our visualization page where the locations are plotted onto a map. We have added lots of features to the map making it user friendly. The UI design of the website has been overhauled to make it more visually appealing and user friendly.

Past Week Accomplishments:

- Bailey: Set up forward geocoding for Mapbox in order to plot locations based solely on name vs based only on coordinates. Revise Dockerfile to include new requirements for script capabilities of Flask app. Updated team website to include new reports.
- Evan: Worked on UI elements, allowing for a more friendly and easy to use UI, as well as added invalid input protection. Setup API request to pull parameters from the input dropdowns and run a command on the server using the parameters. This simulates executing a script for the model and sending the output back to the server to retrieve metadata once the model is trained and stored on the server.
- Ian: Added autocomplete feature to the paper name field in the query to get papers in the database. Changed website styling and theme. Added features to the map to query the given paper's affiliations and center the map over the pin-drops. Increased overall map usability.
- Paul: Completed the script that parses through the APS dataset we have downloaded and puts it into the database, verifying completion and with proper error reporting and progress reporting
- Will: Facilitated team meetings with our client.

Individual Contributions:

<u>Name</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>Hours cumulative</u>
Bailey Gorlewski	Set up forward geocoding for Mapbox in order to plot locations based solely on name vs based only on coordinates. Revise Dockerfile to include new requirements for script capabilities of Flask app. Updated team website to include new reports.	11	56
Evan Gossling	Worked on UI elements, allowing for a more friendly and easy to use UI, as well as added invalid input protection. Setup API request to pull parameters from the input dropdowns and run a command on the server using the parameters.	11	56
Ian Johnson	Added autocomplete feature to the paper name field in the query to get papers in the database. Changed website styling and theme. Added features to the map to query the given paper's affiliations and center the map over the pin-drops. Increased overall map usability.	12	57
Paul Brinkmann	Completed the script that parses through the APS dataset we have downloaded and puts it into the database, verifying completion and with proper error reporting and progress reporting	6	43
Will Postler	Facilitated team meetings with our client.	2	24

Plans for Coming Week:

- Bailey: Continue to work on UI with Evan, and also work on Mapbox styling.
- Evan: Continue working on UI. If the model is trained and stored, work on integrating it into the framework/website.

- Ian: Create another query UI that will be used to send other questions to the model. Work more on website styling and UI.
- Paul: Continue doing maintenance on the data upload and fixing the few bugs left in the script. Develop some queries for the front-end to use. Assist with integrating the model and the database.
- Will: Work on training the ML model to begin integration into our design.