

Sprint 2'

The purpose of this short one-week session is to recoup our loss for Sprint 2. So far, I saw a 14 out of 20, so we got a **70%**. We need to discuss with Michael Hoyer to prove we have recouped our losses and are now back on track. The reason is that there are major difficulties. Furthermore, our image is too big simply from running SQLite.

Issues

The staff pointed out four aspects of failures which led to lost progress.

1. Image is too bulky for just running sql-lite, please consider revisiting the packages listed as dependencies for the container
 - a. Identify NPM dependencies
 - b. ETC: 2 days
2. Installation eventually succeeds, albeit with a lot of warnings.
 - a. We need to make considerations of the warnings.
 - b. ETC: 2 days
3. Backend status is non-functional. We need a functional backend at this stage of assignment.
 - a. This is something we missed. We need to research more on backend.
 - b. ETC: 5 days
4. Test fails since it is not able to query the backend database.

Sun Nov 20th, 2022 19:45 ~ 20:45

At the time of installation, Docker is no longer using. We are using MUI, React Router, and React Native. We do not know what is causing the anomalous behavior, so we have to investigate.

Sprint III Meeting Times:

- Extended discussions are conducted for new ideas, overall progress and journaling, and trying out our program.
 - It should last at least an hour and there should be an agenda.
 - Saturday and Sunday evenings and nights are the best place for extended discussion. They are done online.
- Scrums are conducted every business day. It is a report on what updates and difficulties one have encountered.
 - After running scrums on 22:00, we later moved to 21:00.
 - We will now move the scrum earlier to **19:00**. They are done online.
- In-person meetings are done occasionally and are conducted based on common in-person events and critical issues.
 - A possible time is in-person this Thursday 7pm.

This week's schedule:

- **Falcon**
 - TBA
- **Piyush**
 - Can work on this project any time this week that isn't 10am to 4pm Thursday and 1pm to 2pm Friday.
- **Mack**
 - Will dedicate full time on this project from Wednesday to recoup
 - Taking a lighter course load as well

Urgent

Due to Docker issues, we need to discuss more regarding the Docker installation. We need to clarify Docker installation. How can you prove the backend is functional? It serves frontend, and responds to frontend API.

I tested locally, and it is not working. I am not able to get the backend working after installing the frontend. *Falcon is a Mac, Piyush is a Windows, and Mac is a Linux!*

Projected Goal

We need to show beforehand that our Docker is working, and identify installation instructions and subtleties we missed upon installation. We have to identify why people are complaining about the troubles they are seeing.

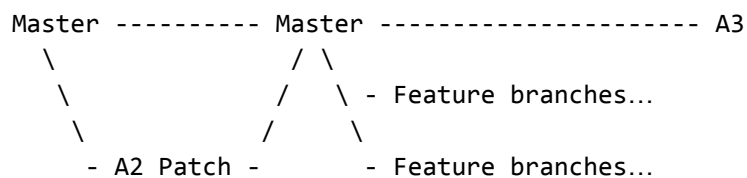
Deadline: Nov 22

Testing and Automation

Due to previous issues, it is hard for Mack to continue testing our app. We will carry on testing and automation throughout A3, in which logging will also be combined with testing.

Workflow

We will propose that our development branches will update.



Blameless Postmortem (Assignment 3)

What goals have been achieved?

- React Dashboard setup
- Flask backend setup
- Import Dataset functionality
- Map visualization functionality
- Docker containerization setup

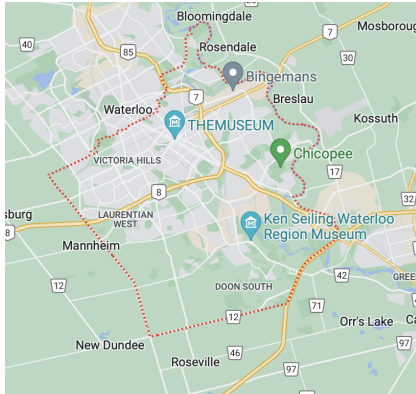
What goals have been missed, and by how much?

- My Datasets tab: Viewing list of currently imported datasets and their schemas
- Testing: Need to do this on both frontend (Jest) and backend (Python Unit tests)
- Automated Testing: GitHub Actions integration

How plans were adjusted, in light of that information, including goals or features that were dropped, what other changes were made and why?

- My Datasets tab, testing, and GitHub Actions will be carried over from A2 to A3 due to teammate's external commitments.

A3 Work: Look into accuracy of reverse geolocation



Piyush

- Improving Dashboard UI
- Adding more options for Importing Datasets as mentioned in A2 Writeup
- Formatting Dataset (CRUD operations)
- Visualization Selector: Adding options for Visualizations (Collaborate with Philippe)

Philippe

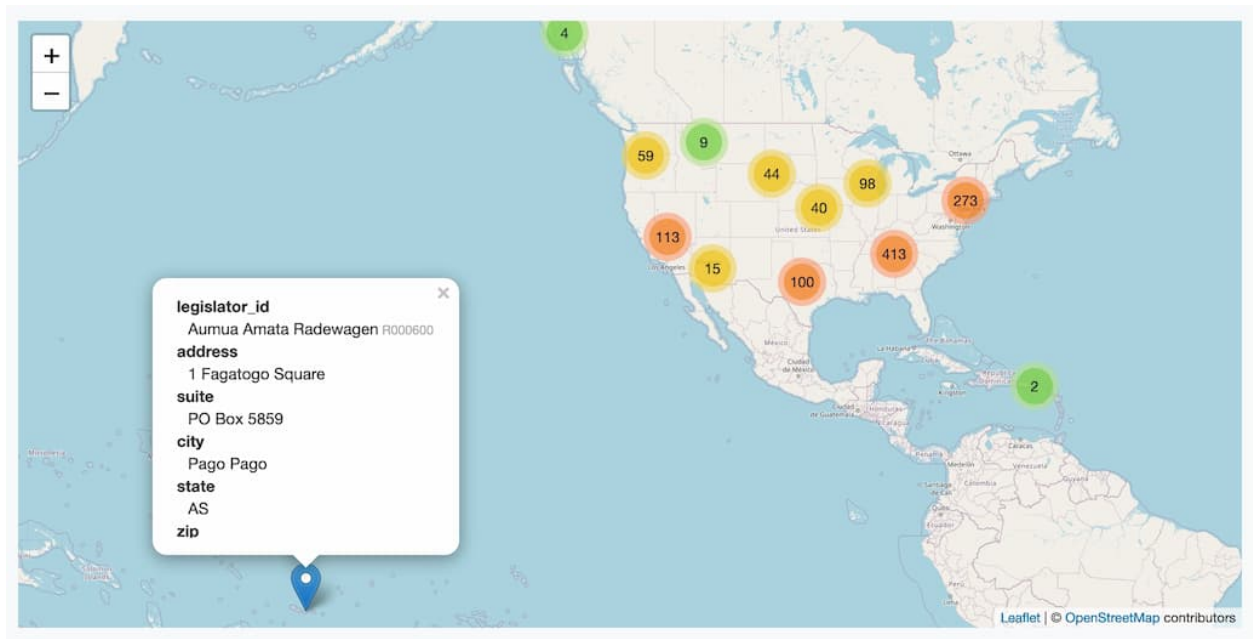
- Reverse geolocation fix
- Map boundaries
- Improve data ingestion workflow
 - When dataset is submitted, export the server response immediately and cache it
 - If modifications are made to a dataset, update the cached version
 - This will create a much more responsive website
- Live data (stretch goal)
 - Find a way to scrape data from <https://twitter.com/TPSOoperations>
 - Take intersections and add those as points on the map
 - Live data can be used to update current backend

Mack

- Logging, *Testing*, *Automation*
- My Datasets tab: Getting Datasets list and Displaying Schemas
- Sorting data by crime type
 - Data can be color coded to identify crime hotspots
 - Crime hotspots helps us identify where the crime is frequent in and causes of crime.
 - Total crime
- Filtering crime type
 - Felonies vs Misdemeanors
 - Allow user to filter the dataset by columns and values (essentially not have the user write SQL, but rather let them filter using a React form)

Undecided

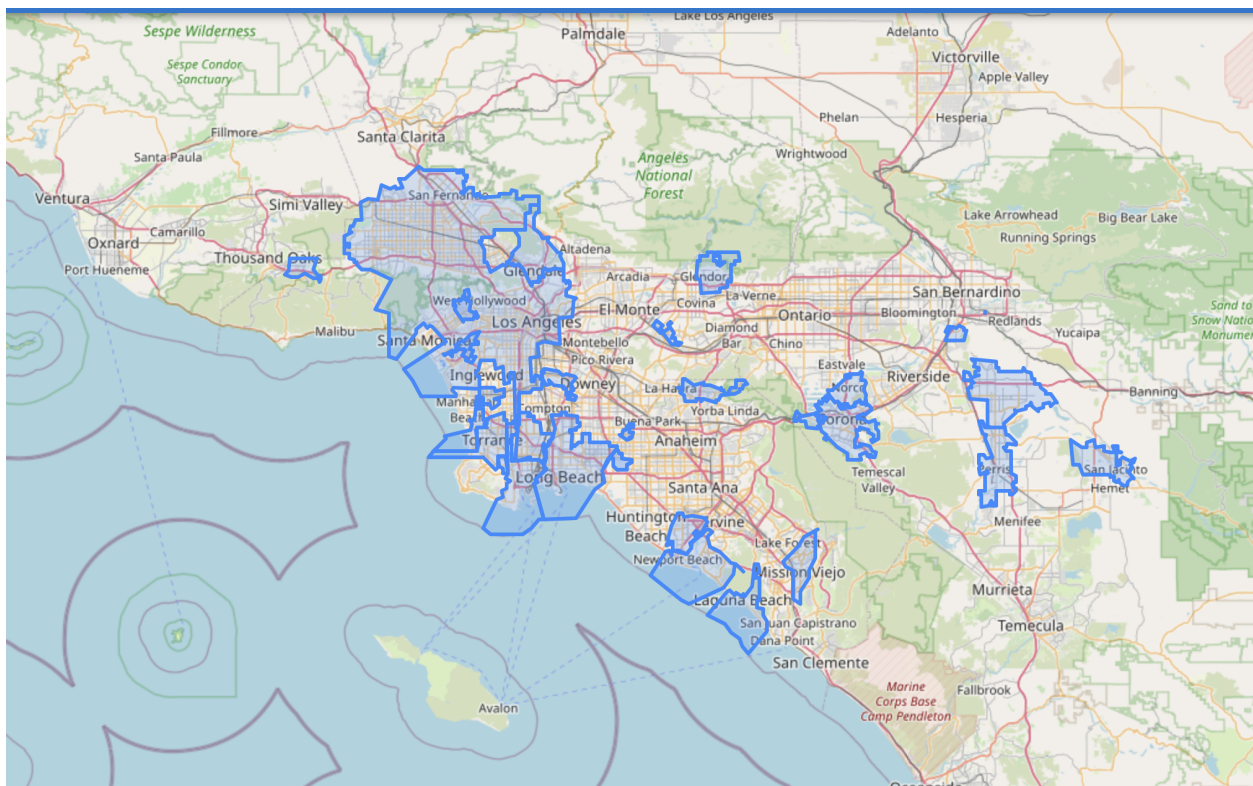
- TBA



Monday Nov 28 meeting

Some progress has been made.

Philippe has been able to add map boundaries for our locations on the map



Data takes a really long time to process, the api we are using, openstreetmap Nominatim is rate limited to 1 request per second. Our dataset is very large, so processing all that data will take several hours.

As this takes a long time, we will need to cache our results. Provide a sample .db or .csv that can be used to create our data.

Data ingestion method will be as follows: Receive csv -> transform to sqlite db -> make appropriate requests from Open Street Map, modify sqlite database to have that information -> Serve requests by outputting db in json format.

Data from that api is not always correctly formed, for example lat and long are sometimes swapped, city names do not exist, etc.

Was able to detect swapped lat and long, but for city names that don't exist, we will have to leave that out of our dataset.

Unit tests should ensure the validity of our datasets

Philippe to use json.parse to take in geogjson data in the frontend

Nov 29 meeting

Mack is experiencing issues with communicating with the backend from the frontend.

Issue is due to port differences. Mack was running the backend on port 5000 when the frontend makes a request to port 3000.

Discussed changes to the mapData api endpoint. Mack will need to add dbname endpoint to his requests to mapData.

Github actions still in progress

Dec 01st, 2022 11:50

The three contributor's have merged their branches and all issues have been merged.
Issue: Nonunique identifier. Each square on the map is its own div.

!MULLIGANACEOUS!!: to import, or multiple datasets, it generaes one db file for each.
for each, os grabs all db files

[02:10]!!MULLIGANACEOUS!!: aggregate; do it from backend

[02:12]!!MULLIGANACEOUS!!: state data: backend or locally frontend

[02:13]!!MULLIGANACEOUS!!: i tink that can be done fron backend

[02:16]!!MULLIGANACEOUS!!: letting user select data

[02:17]!!MULLIGANACEOUS!!: 24 man hours to get the heatmap and

[02:17]!!MULLIGANACEOUS!!: yu cannot do
[02:18]!!MULLIGANACEOUS!!: testing and logging
[02:18]!!MULLIGANACEOUS!!: testing on the react and standard unit etst for backend

Dec 2

Mack and Philippe conducted code review on Mack's pull request.
A rudimentary my-datasets tab was merged into master.
Mack's request to change the logo was rejected
Github partially functional github actions were merged into master.
The docker test is passing, python unit tests are not functional at this time as Mack has not written them.
The design of how to detect new databases was discussed. Mack will create a new endpoint that runs ls in the database folder and returns the result.

Dec 3

Agenda:

- Merging in finished My Datasets tab and Visualization Selector
- Ensuring testing suite is complete and all tests pass
- Ensuring Docker and GitHub actions pipeline are running successfully
- Creating a template of our presentation and assigning slides

Discuss with Mack about his failing db requests.

Mack did not specify datasetID

Created template for slides.

Decided the following slides will be made

- Dataset/Problem we chose
- Solution we chose to develop (visualization dashboard)
- Tech stack
- Sprints overview
- Demo
- Technical Challenges, Solutions, and Considerations
- Future improvements

Demo will be screenshare, ~1 minute

Philippe will be responsible for demo, technical challenges and solutions regarding the map, sprints overview

Mack will be responsible for technical challenges, solutions, and considerations, future improvements

Piyush will be responsible for Dataset/Problem we chose, solution we chose to develop, tech stack.

Full runthrough will be scheduled for Dec 4 at 9PM.

December 7

As the instructor changed the presentation deadline to Dec 8, the full runthrough scheduled for Dec 4 was moved.

Status update on unit tests

Mack was not able to develop any unit tests

Philippe discussed offline with Mack and took the python unit test task over. Philippe was able to write some unit tests ensuring the validity of the data ingestion portion. The unit tests are passing and there is a green checkmark on github.

Mack's latest pull request

There were several bugs introduced in Mack's latest pull request.

- The map view would load several datasets at the same time erroneously.
- The map view showed state and city data at the same time preventing city data from interactions.
- The heatmap thresholds were modified causing areas of high crime to be marked as less crime.
- The violent crime calculations were modified to include non-violent crime.
- A new heatmap color of gray was added.

We discussed the issues that needed to be fixed. Mack will revert the heatmap changes, fix other bugs. Mack said the pull request will be merged tomorrow. Mack will work on his slides as well.

A rehearsal is scheduled for tomorrow (december 8) at noon

December 8

Agenda:

- Merge Mack's pull request
- Rehearse for the presentation

Mack was not present for the scheduled meeting

Philippe and Piyush reviewed Mack's pull request. The heatmap changes were not reverted. The file structure was changed causing unit tests to fail. Philippe and Piyush worked to fix these issues and were able to merge the pull request.

As Mack was not responding to messages, a rehearsal was done. Piyush agreed to take over Mack's part of the presentation if he did not attend.

Some suggestions were made to improve the slides, the slide order was reorganized.

Another meeting will be scheduled later today if Mack becomes available.

December 8, meeting 2

Agenda:

- Rehearse the presentation
- Last minute changes if required

Mack responded to messages and was available for a rehearsal.

Multiple rehearsals were conducted, some suggestions were made to improve Mack's part.

Slides were finalized.