Project Status report

Name: Rishabh Prasad

Community (UN SD goal): Goal 11 – Sustainable Cities and Communities

MVP # 2

Sprint cycle dates: Nov 2 / 2021 – Nov 15 / 2021

Project Name	Green Screen
Blurb	Green Screen serves as a solution to create better understanding of the state of recycling for the City of Regina within Waste Management Workers. As the city suffers from significant recycling contamination, it is vital to build knowledge of its source. Green Screen will be an actively updated knowledge base which promotes asynchronous learning for workers. This dashboard will serve to improve the experience of waste management workers consumption of information, allowing them to create actionable goals to lead the city towards a sustainable and green future.
For Week Ending	Nov 16 / 2021
Project Status	Yellow
Status Description	The status is currently yellow as only 2 / 3 stated objectives within the Activity Based Schedule document and as discussed in the Scrum for MVP 1 were completed. The objectives which were completed were: 1) User Sign-In Flow 2) Integrating interactable Waste Collection Zone Layers Integrating real-world data was incomplete as a result of the Streamsight API returning "403 Forbidden" status requests for front-end fetch requests being made for data, even though the user has all security requirements. To address this issue, I have scheduled a meeting and have been communicating with Avery from Prairie Robotics who works on the Streamsight API. Our goal will be to resolve this issue in the upcoming sprint by pairing up.

Activities—During the past sprint cycle

1) Integrating User Sign-In flow which implements RBAC within the dashboard
2) Integrating a Map Package which suffices the needs of this project
    a. Leaflet was initially chosen as it is a powerful package, in terms of creating highly effective maps. I spent additional time attempting to resolve issues the React framework has when reading Leaflet packages, however, this effort unfortunately did not work out and consumed a lot of time.
    b. The second option I explored was with React Google Maps. Google Maps from the articles I read and research I did seemed as if it would be a good option as well to implement interactable layers which overlay a map. However, implementing this also developed issues when working with React. I believe this is because this package is a wrapper for an implementation of Google Maps which exists in JavaScript. Thus, the documentation was lacking and implementing my desired functionality became a difficult task extremely quickly.
    c. Finally, I implemented a map using Mapbox GL. This package has an adequate amount of documentation which is up-to-date, and I believe it is a good solution moving forward. It allowed me to load GeoJSON layers on top of OpenStreetMaps with some interactable mechanics fairly efficiently.
3) Requesting Data from Streamsight-API
    a. This was intended to be accomplished this week however, there is bug within the API that is not allowing requests to be fulfilled and returns a "403 Forbidden Request"
    b. I have been in communication with Avery and hope to resolve this issue as soon as possible

University of Regina | FACULTY OF ENGINEERING & APPLIED SCIENCE

Project Issues

Streamsight-API denying requests from the dashboard

- Any real-world data requested needs to be first authorized by the API
- This issue is concerning as the dashboard depends on data which can only be accessed through the API
- My initial thoughts of addressing this issue is to work with Avery and resolve concerns in the week of Nov 15
- However, if this is not attainable, an option is to hold and use temporary data stored in an JSON format for offenses, contamination, etc. Then the logic can be built upon in following sprints for the capstone.

Learning and implementing mapping software within React

- This was largely discussed in MVP 1, however, the struggle of finding and implementing the correct package continued to MVP 2
- Although tough to learn as documentation does not cover the full extent of each of the products, the learning experience has been valuable

Project Changes

Addressing unexpected issues with the API

- As mentioned above, the goal is to resolve issues and resume development of Green Screen using data from the Streamsight API.
- If this is not resolved, I believe using data from a simple JSON object, as opposed to fetching this data might be sufficient temporarily to satisfy the requirements of ENSE 405, MVP 3. However, a fix will be issued while building this for future MVPs as the project relates to the capstone.

Activities—Planned for Next Week

- Resolve Streamsight API 403 Status Code – 2 development days
    - Integrate real-data, if successful – 1 development day
- Implement calculations and logic for display cards – 1 development day
- Project Commercial – 1 development day

Reflection

Do you feel "on track"?
I feel slightly off-track and derailed by the API not working as expected, but I am optimistic that this problem will be resolved.

What progress do you particularly feel good (great) about?
Implementing a map with layers was extremely challenging and time consuming as documentation was extremely limited, but it felt immensely rewarding when it began to work. I have very little experience working with React and no experience with GIS data, so any success here felt amazing to accomplish.

What barriers (if any) do you feel is/are a current impediment to success?
Requesting data from the API is currently a barrier to success and may prove to be challenging to resolve for the upcoming MVP 3 deadline.

What help (if any) do you require to move positively forward?
I will need help from Avery as he maintains the API to identify where API requests are being rejected.

What questions or concerns do you have (if any)?
Understanding that the following sprint will include time to debug and identify issues within the API, accomplishing goals as initially suggested by the scope of the project feels challenging for MVP 3. I think the scope needs to be temporarily narrowed slightly and expanded upon MVPs beyond MVP 3, as development will continue beyond the upcoming sprint.