

Assignment #4

Final Project Outline, SWOT, Technology Stack, and Presentation



"Avoiding Collisions in Hamilton"

Web Map Application

DECEMBER 3, 2021

FORREST PLANNING LTD.

Authored by: ERICA FORREST (001136327)



“Avoiding Collisions in Hamilton”

Web Map Application

Forrest, Erica (001136327)

Introduction

The purpose of this report will be to provide a technology stack overview and SWOT analysis on the map created by FORREST PLANNING Ltd. for *Avoiding Collisions in Hamilton*. The technology stack overview will identify the software and processes used for the creation of the map. The SWOT analysis will identify strengths, weaknesses, opportunities, and threats of the map. This report will aid FORREST PLANNING Ltd. in future map creations to best optimize time and resources.

Technology Stack Overview

The software used for the *Avoiding Collisions in Hamilton* map include Mapbox Studio, Mapbox Directions API, JS Fiddle, Javascript Library, and GitHub. A custom basemap was initially developed using Mapbox Studio. This was done so using the Basic Map in the ‘Chilled’ template and editing the map to have a more colourful layout. This included adjusting the colours, fonts, and sizing of the basemap, water bodies, labels, points of interest and roadways to create an appealing map for the user. After customizing the map, the Mapbox Access Token was used to provide a basemap for the overall project. The Javascript library, Polyline.js, was used to convert routes used in Mapbox Directions API to GeoJSON. Once the routes were converted, they were used in Turf, another Javascript library, to add spatial and statistical analysis to the web map. The overall structure for the web map was created using JS Fiddle. JS Fiddle was used to build and test the front-end code of the web map, this included HTML, CSS, and JS coding. After building and testing the codes, the final project was copied into GitHub, to create a GitHub repository. This GitHub repository contains files and code history of the project.

SWOT Analysis

STRENGTHS	<ul style="list-style-type: none">- Identifies collisions in Hamilton, ON and how to avoid them.- Map is interactive and meets client’s needs.- Able to manipulate layout, such as colours, font, and other design aspects with ease using Mapbox Studios.
WEAKNESSES	<ul style="list-style-type: none">- Costs associated for using Mapbox Directions API.- Other costs associated for using other Mapbox outlets as well as costs for using multiple access tokens.- Everyone has access to Mapbox and therefore can create a similar map design.
OPPORTUNITIES	<ul style="list-style-type: none">- Ability to add additional features and spatial/statistical analysis to the map through Javascript Library.- Can change the layout and location of web map with ease to apply to other clients and project’s needs.
THREATS	<ul style="list-style-type: none">- Information can be replicated from competitor through Mapbox and use of tutorials that are readily available online.