

DESN27425 | FALL 2022

INTERACTION DESIGN: MODELLING AND MATERIALS

# Project 2

# MODELLING SPACE: MAPS

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Submitted to Steve Hudak  
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## DESIGN STATEMENT

### Explore Historical Significance Through Spatial Data

This project aims to explore ways to represent a location through visual elements and spatial data. Bronte Harbour was chosen to centre the project around, specifically Bronte Heritage Waterfront Park and the memorial found here. The harbour did not seem significant at first but only through researching and examining it can interesting and valuable insights be gained. This location is investigated visually through photography and map customization, and historically through individual research. Multiple mediums and softwares are used to aid in this exploration. During formstorming, a wide range of style is generated in order to arrive at the best customized styling for the theme and experience. The project attempts to visually present knowledge on Bronte history through a map. The final project design draws from previous explorations to display historical occurrences over spatial data, placing the viewer in the time and location of the Bronte Harbour of the past to experience a part of the lives then.



## RESEARCH

### About Bronte Harbour

My research on Bronte Harbour was focused on the history of the harbour and its fishing industry. Most of the information I found outlines a general history of the harbour and does not provide much insight on the lives back then. This research is used to create the content for the pop-up window.

#### Sources

“Bronte Fishermen’s Memorial.” *Oakville*, <https://www.oakville.ca/assets/general%20-%20culture%20recreation/BronteFishermensMemorial.pdf>

“Bronte Harbour.” *Oakville Trails*, <https://web.archive.org/web/20100822203542/http://www.oakvilletrails.ca/is-bronteharbour.htm>

“Bronte Inner Harbour.” *Oakville*, <https://www.oakville.ca/culturerec/bronte-inner-harbour.html>

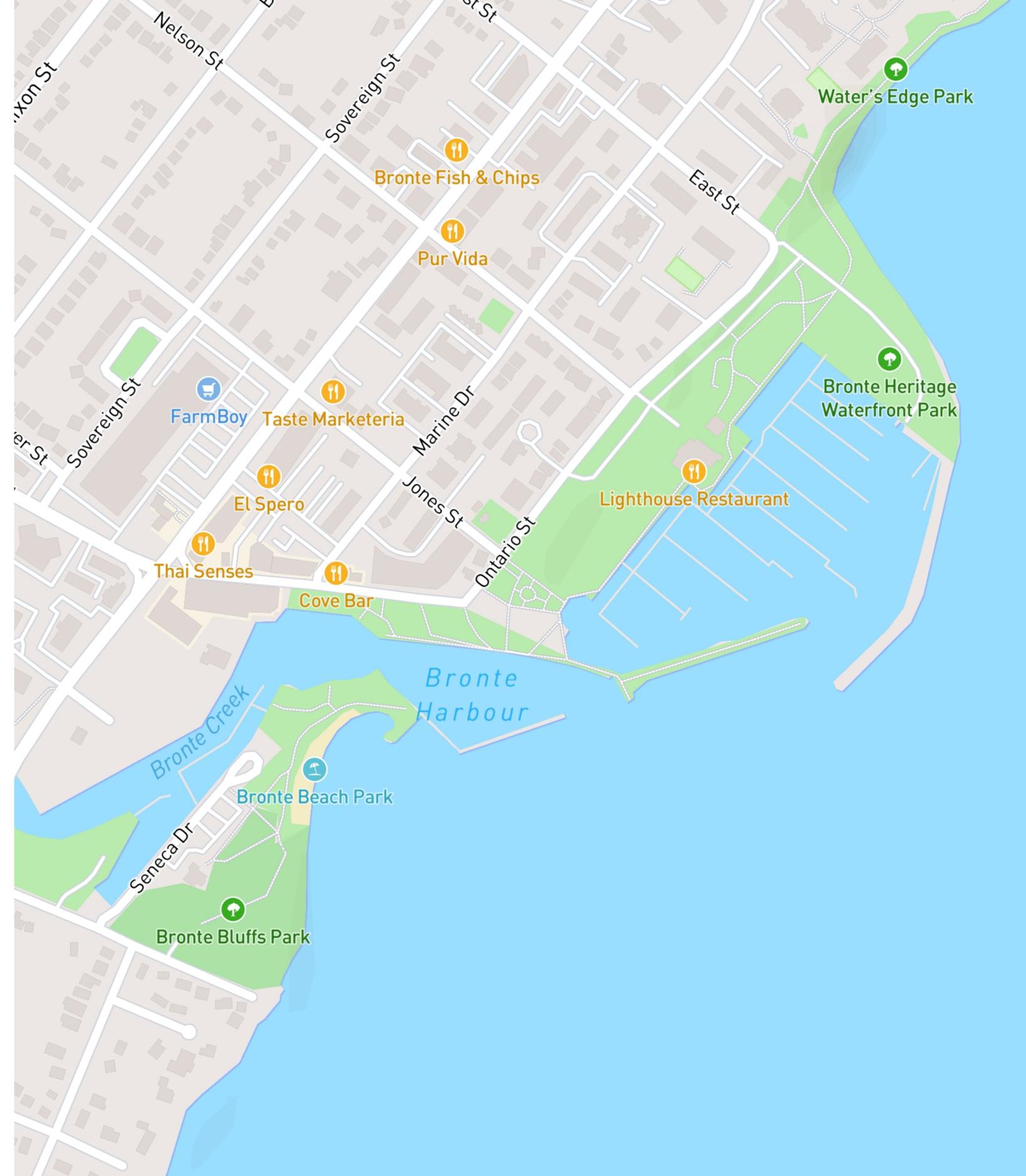
“Bronte, Ontario.” *Wikipedia*, [https://en.wikipedia.org/wiki/Bronte,\\_Ontario](https://en.wikipedia.org/wiki/Bronte,_Ontario)

“Bronte Village Then And Now.” *Bronte Village*, <https://bronte-village.ca/bronte-village-then-and-now/>

“The Village of Bronte: Preserving the Past.” *Multicultural Ontario Collection*, <https://vitacollections.ca/multiculturalontario/262/exhibit/1>

#### Other materials

The code for the embed map and model viewer was taken from the Mapbox studio and weekly tutorials, with my own modifications. The colour schemes were generated from the Cartogram plugin. Visual elements for the fabrication activity were downloaded from Mapbox. The audio recordings used in the final project design were taken from Adobe Sound Library and Freesound (the recordings are under Creative Commons 0 license).



## FORMSTORMING

### Week 6 Activity A: Photography

The photography formstorming activity was done in McCraney Valley Trail (behind Residence 2), Lakeside Park, and Bronte Heritage Waterfront Park. Unlike the previous project, the lighting here cannot be controlled. The weather can drastically affect the quality of the picture. The pictures of McCraney Valley Trail were taken late afternoon; it was starting to get dark and the streetlights were turned on. In combination with the leaves' colours, the lighting creates a seemingly dreamy and magical atmosphere (*week 6a, image 2*).



The pictures of Lakeside Park and Bronte Heritage Waterfront Park were taken early afternoon and only an hour apart. The weather at Lakeside Park was nice and the sky was clear (*week 6a, image 5*). The colour of the lake evidently reflected the weather condition. When I got to Bronte Harbour, it was cloudy and looked as if it was about to rain (*week 6a, image 18*). Both overlooked Lake Ontario but had clearly different atmospheres.



On the topic of time, this activity was an opportunity to see how an area changes through time. The picture on the left was taken the first time I went to Bronte Harbour in early September of this year. The picture on the right was taken for this formstorming activity in the middle of October (*week 6a, image 24*). The weather condition aside, the changes in the leaves' colours would give viewers different feelings about the area.

## FORMSTORMING

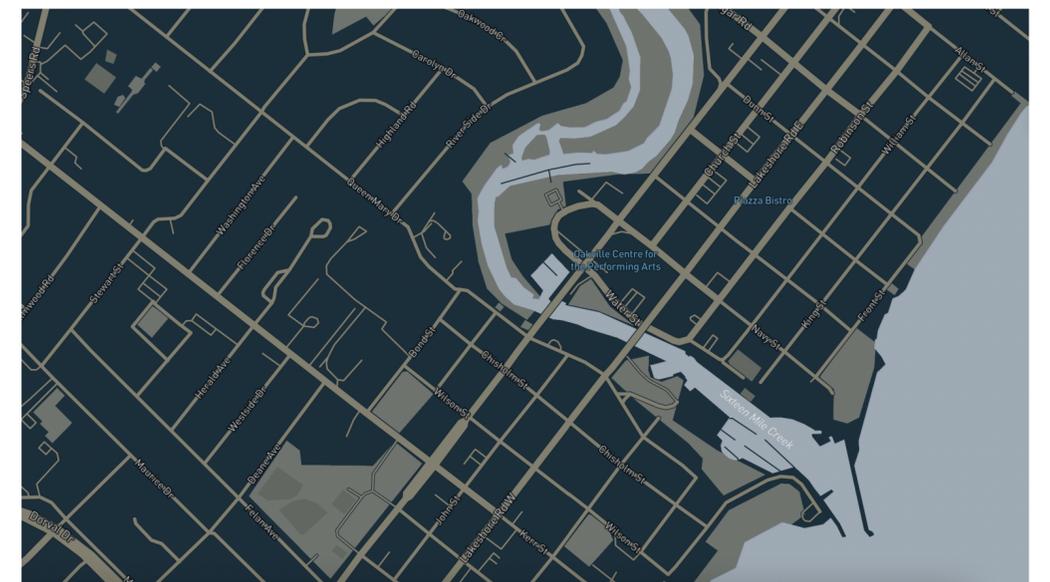
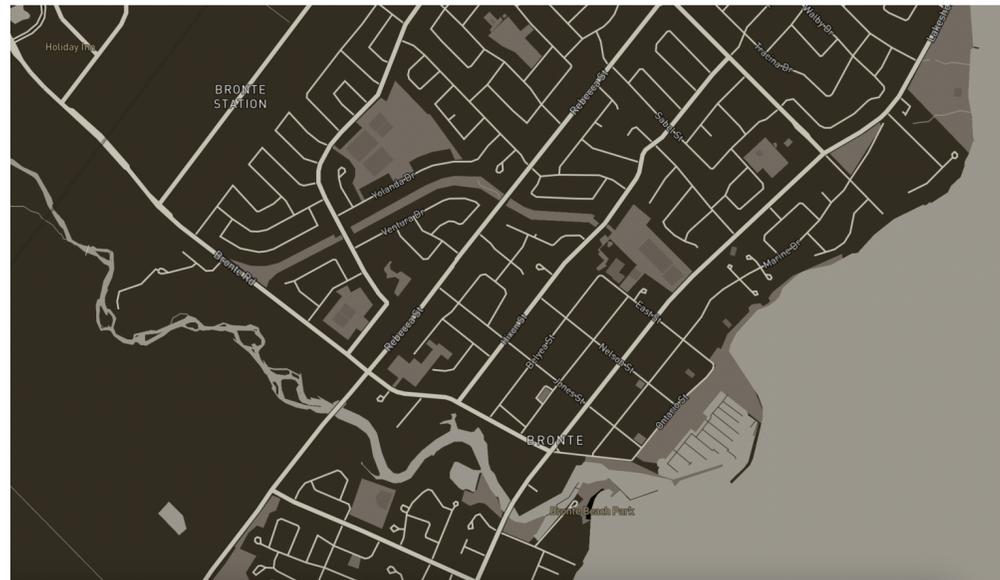
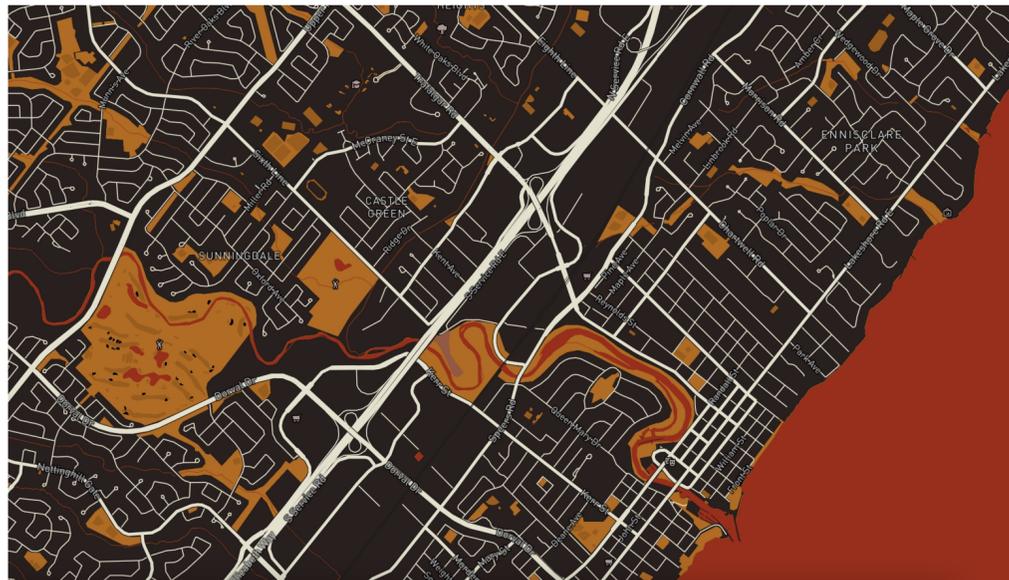
### Week 6 Activity B: Mapbox

I used the tutorial to familiarize myself with Mapbox interface and how different elements function individually and together. I did not explore further than the colours and the visibility of different elements.

Using the Cartogram plugin, I imported pictures taken from the previous activity and generated as many colour schemes as I can. Some of them were more traditional, with blue water and green terrains (*week 6b, image 16*). Changing the colours slightly still adheres to how maps commonly appears but seems to have a different theme (*week 6b, image 14*).

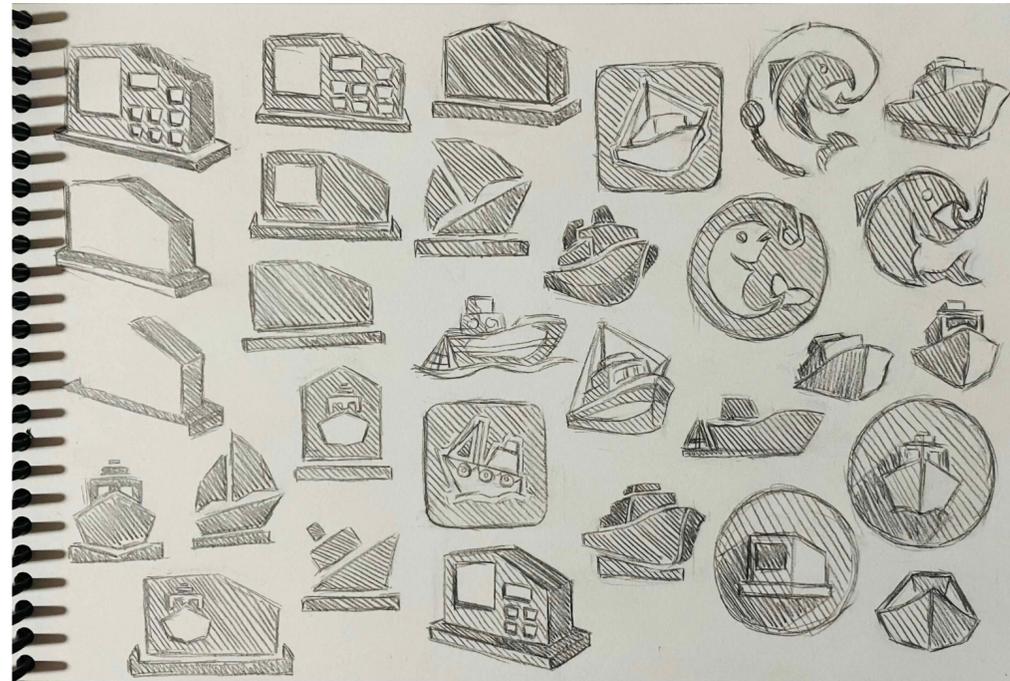
The more colourful a picture, the more schemes can be generated from that singular image. Within a colour scheme, I can switch around the which colour applies to the water and which applies to the other elements. A scheme that is immediately distinctive from the others was generated from the pictures from McCraney Valley Trail (*week 6b, image 7*). Aside from having red water, the clear colour contrast between each element makes them stand out from each other.

On the opposite end, some colour schemes are more subtle and monochromatic. The contrast is not as high but the colours and elements are still distinctive (*week 6b, image 20*). They would be suitable for historically themed projects.

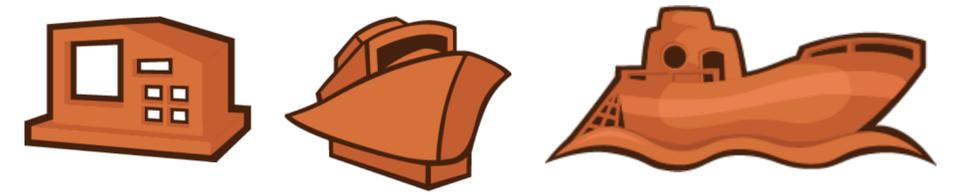


## FORMSTORMING

### Week 7 Activity: Mapbox Customization

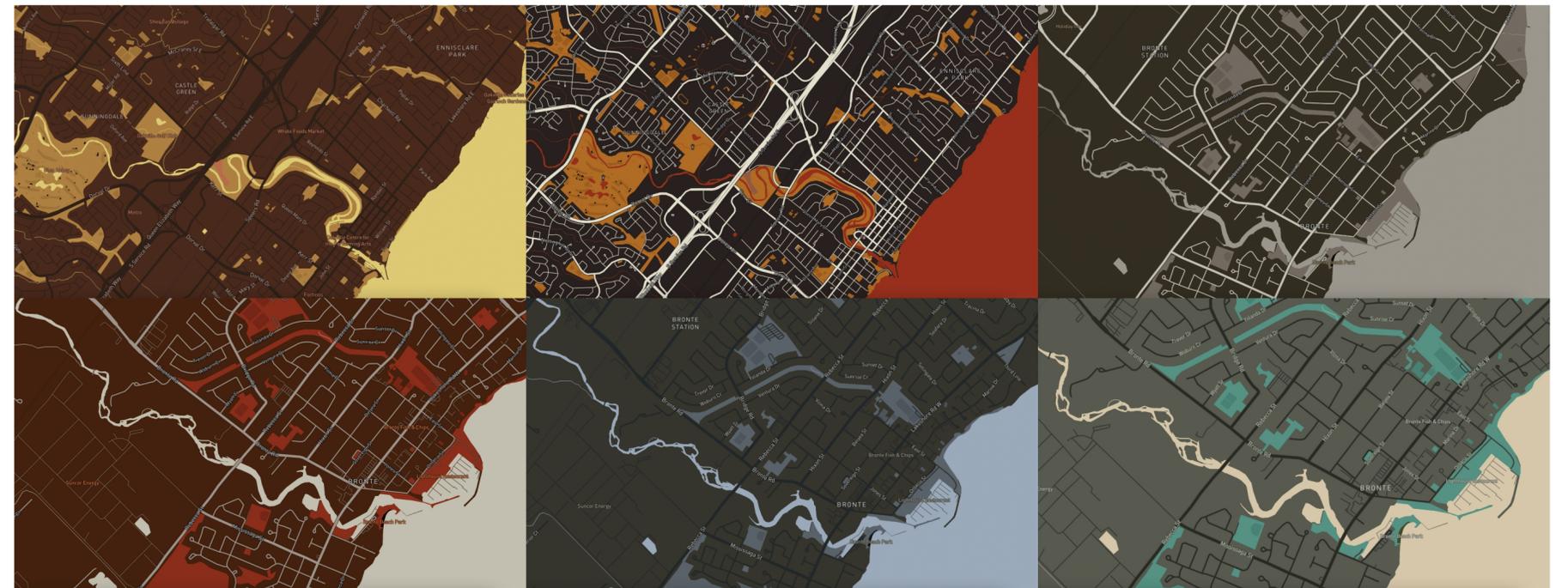


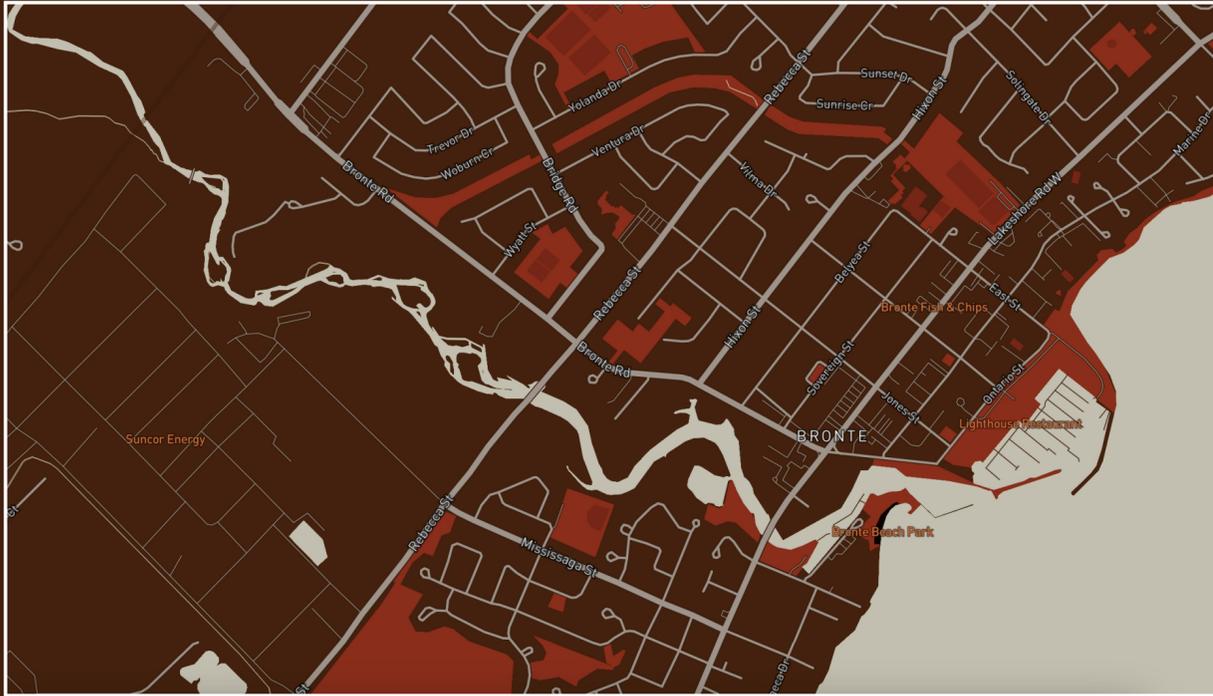
The Bronte Fishermen's Memorial was chosen as the anchor of the map. I wanted to draw more attention to the memorial because it tells an interesting story about the fishing industry and the past of Bronte Harbour, and I only noticed it when I was actively looking for something to photograph.



This stage of exploration began with traditional sketching to generate as many ideas as possible (*week 7, image 1*). The icon should be simple and recognizable. At first I based the design on the shape of the monument, then incorporated related imageries such as ships and fishing rods. My final icon designs reflect different levels of abstraction of the initial object. The first one clearly resembles the original memorial. The second one combines the ship and the general shape of the memorial. The last one is a fishing ship; the only element carried over from the memorial is the base in the shape of waves.

From week 6 Mapbox formstorming activity, I selected the colour schemes that are either the most interesting or the most suitable for the historical theme I am going with (*week 6b, image 5, 7, 20, 21, 22, 25*). I avoided colours that are commonly used for maps. I imported the schemes in Mapbox one at a time, then generated a style tile for each. Since I am anchoring the map to a memorial dedicated to the fishermen who put themselves in danger for a living, having the red water would have reflected the lives that were lost. After seeing how the schemes look on the map, the more subtle colour contrast was more appealing. The style that I decided to move on with is a combination of non-traditional colours and a historical feel (the chosen style tile is in the next page with some adjustments).





**Greenspace #8A2D1B**



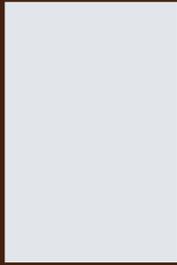
## Place

Source Sans Pro Semibold

**Place label #D7713B**  
**Text halo #0B0603**



**Road #9E948B**



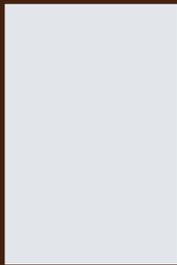
## Subdivision

Source Sans Pro Semibold

**Place label #E2E6EB**  
**Text halo #050201**



**Water #C2BEB0**



## Road

Source Sans Pro Semibold

**Road label #E2E6EB**  
**Text halo #050201**

**Base #44210E**



**#D7713B**

## Bronte Fishermen's Memorial

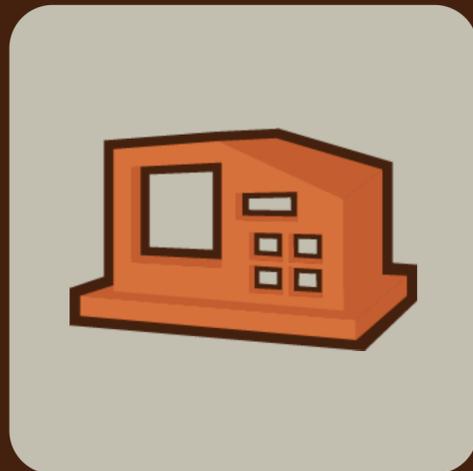
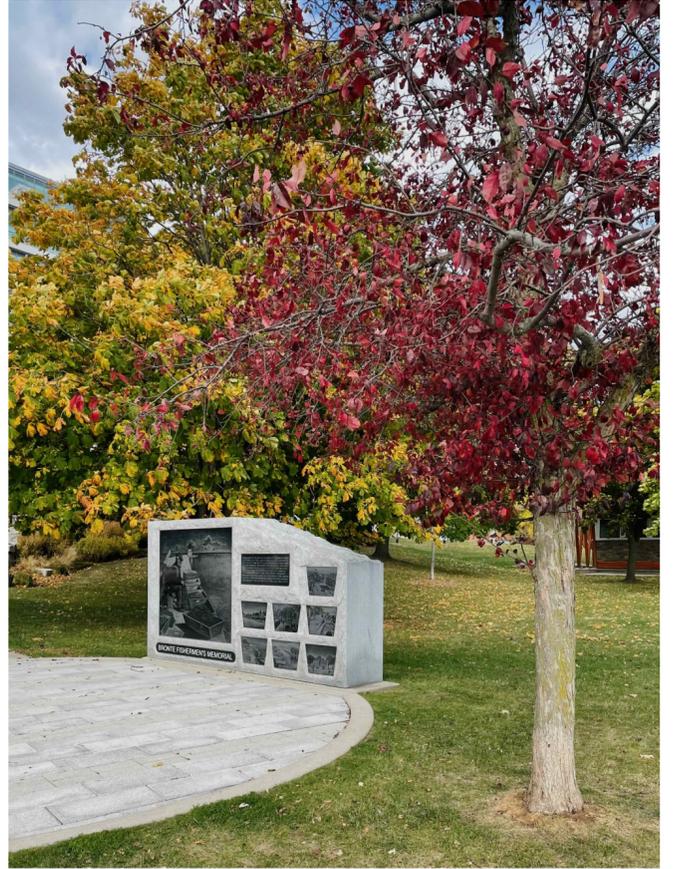
Helvetica Neue Bold



**#44210E**

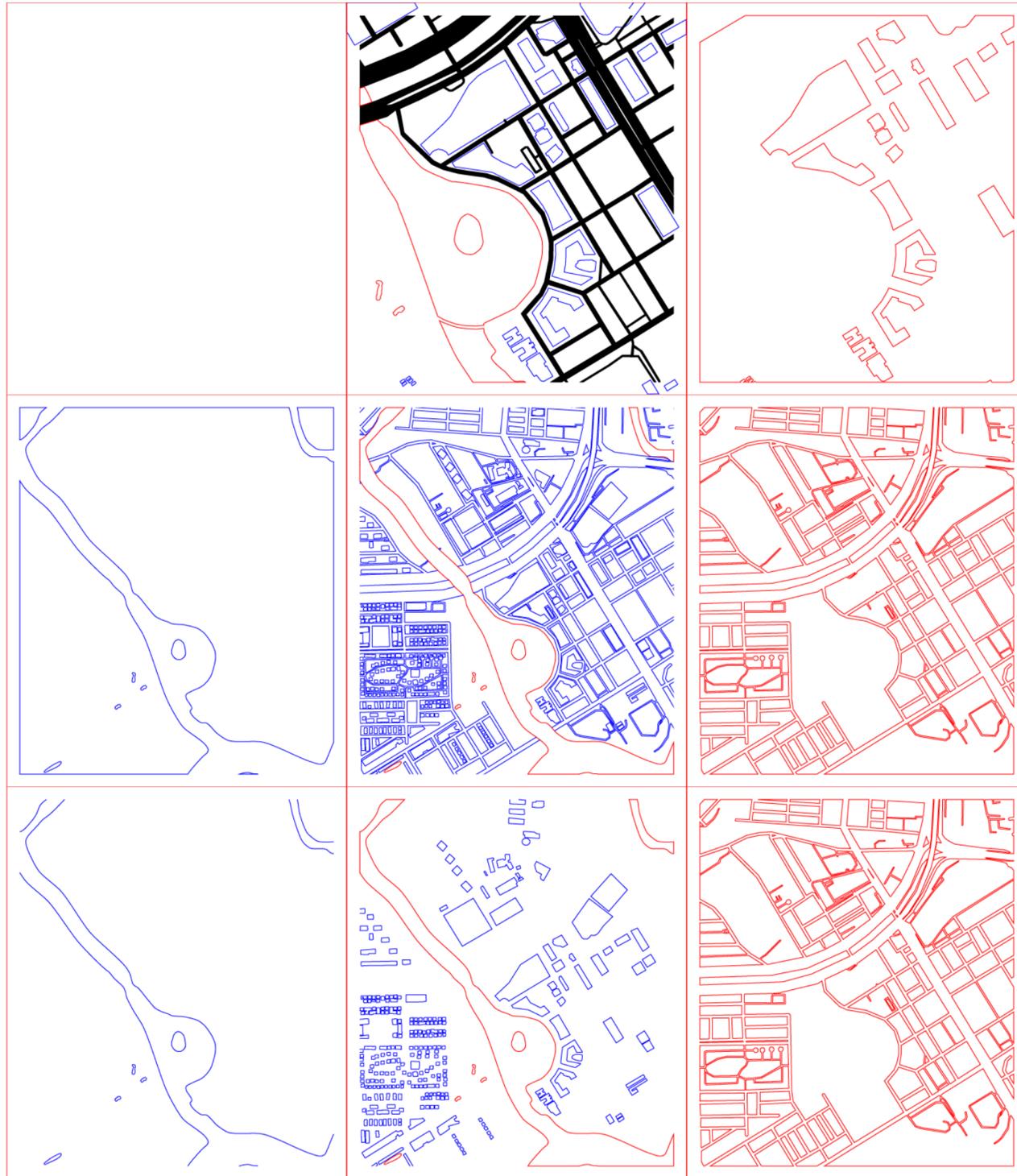
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## FORMSTORMING

### Week 8 Activity A: Digital Fabrication



The location I chose for this activity is an area called Crescent Lake in Ho Chi Minh City, Vietnam. This was an opportunity to do something more personal and compare the land development between two different countries. Grids are used for the general layouts of both locations. Unlike Bronte Village, the roads around Crescent Lake are denser and there are more unused green spaces, not including the parks.

The initial idea was to have the water areas cut out and the roads engraved on the same layer, and then glued the cut-out buildings on top. If I move on with this idea, it would be more cost-efficient to have more importance put on the lake. After finishing the file preparation, the map is not very detailed and still might cost too much for a test piece (*week 8a, image 15*). Based on advice from other students, I decided not to have any engraving and instead have the roads cut out and on top. The second attempt of the preparation (*week 8a, image 16*) has the roads etched along with the buildings due to a miscalculation on my end, which would likely be unnecessary. The third version of the preparation (*week 8a, image 17*) is what was submitted and cut. On the file, when the outline is 0.01pt, the roads seem like they were at least a millimetre wide. However, when it is cut, some of them look paper-thin and do not resemble roads (*week 8a, image 25*). The layering and other details turn out well. Overall, it was a good learning experience, especially in regards to how this medium works.



## FORMSTORMING

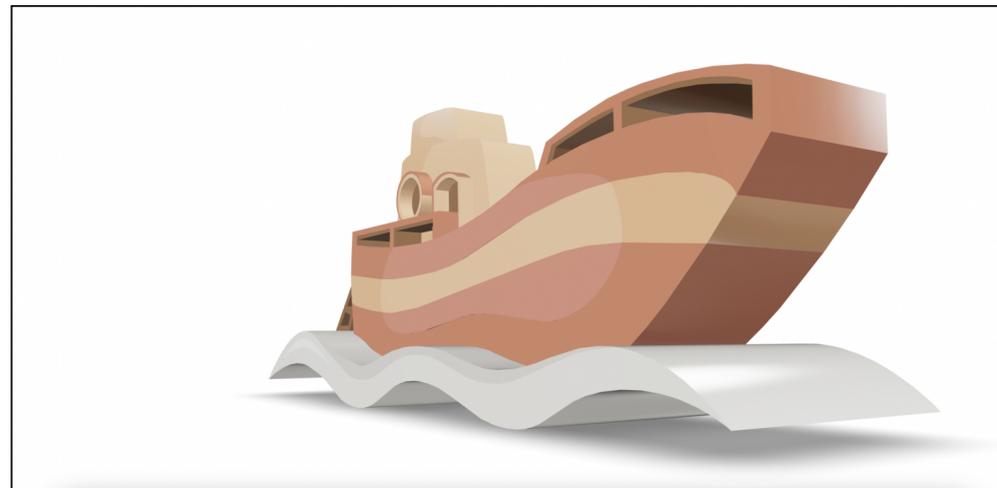
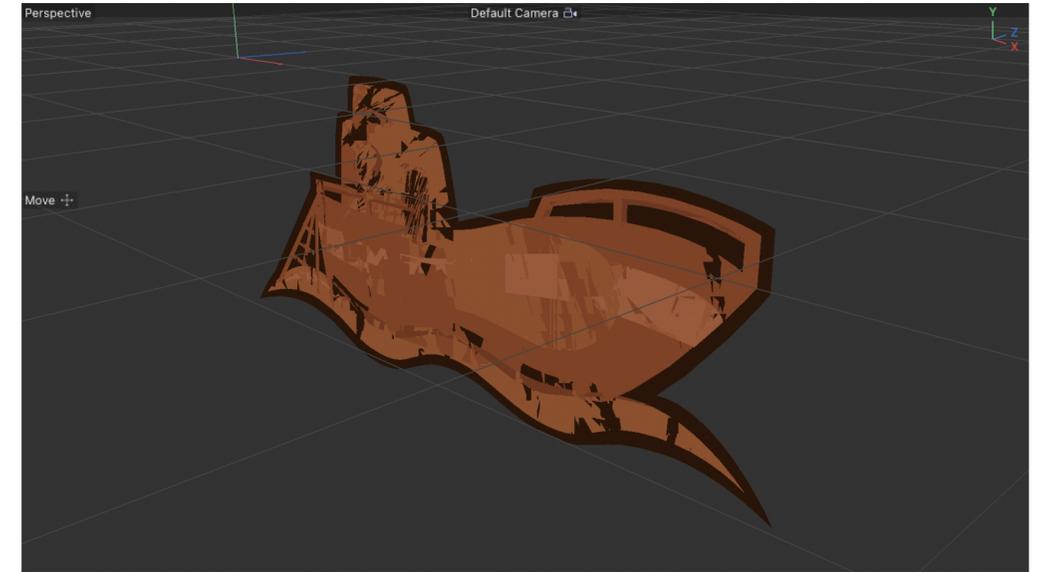
### Week 8 Activity B: Geolocation-based AR

Some aspects of this activity were used for my final project. I did not explore the geolocation feature since it was not necessary. I made a model of a reimagining of the memorial using my chosen icon. My goal was not to replace or redesign the current memorial, but create a visual association between the monument and what it is dedicated to so the connection is more immediate.

I imported the SVG I had of my icon into Cinema 4D. Most of the 2D shapes overlapped each other (*week 8b, image 1*), so the colours did not render properly when exported. It was also more difficult to extrude certain parts more than others.

I went back to Illustrator and separated each part as their own shape, making sure nothing overlapped and they all fit together. The SVG was imported as a spline and then extrude to the appropriate widths. The water was extruded more to stand in as the base. Extrusion in Cinema 4D does not work well with curved splines, so there are still some small gaps in my final model.

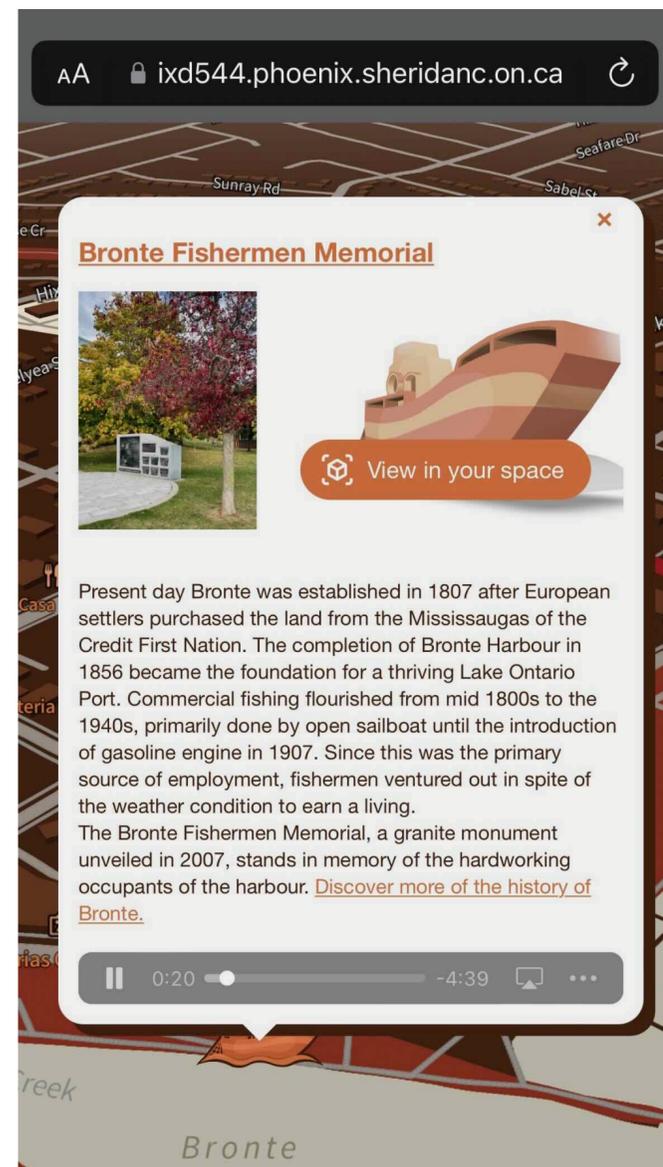
I utilized the colours in my current Mapbox style for the model. The lighting and materials (*week 8b, image 5*) did not export correctly; however, I think the glossiness of the model in the model viewer actually improved it (*week 8b, image 7*). It resembles both a monument and an achievement. The colour appears more correctly in AR and the glossiness stays (*week 8b, image 9*).



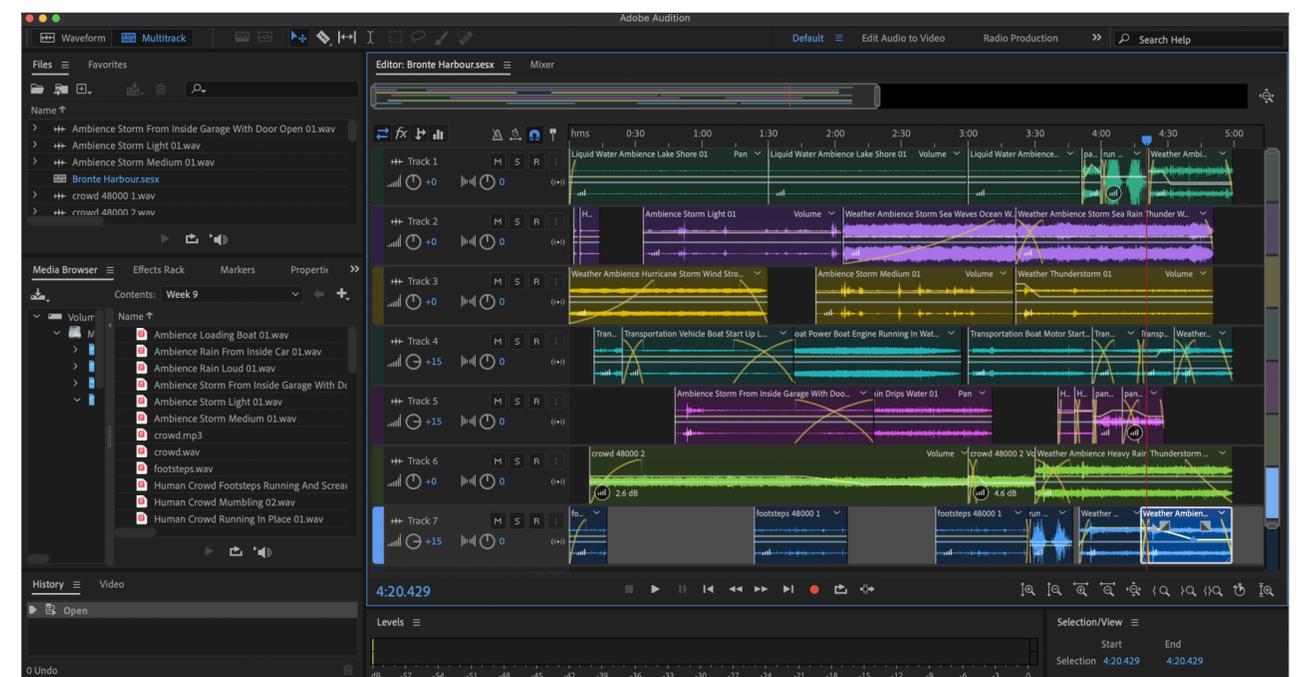
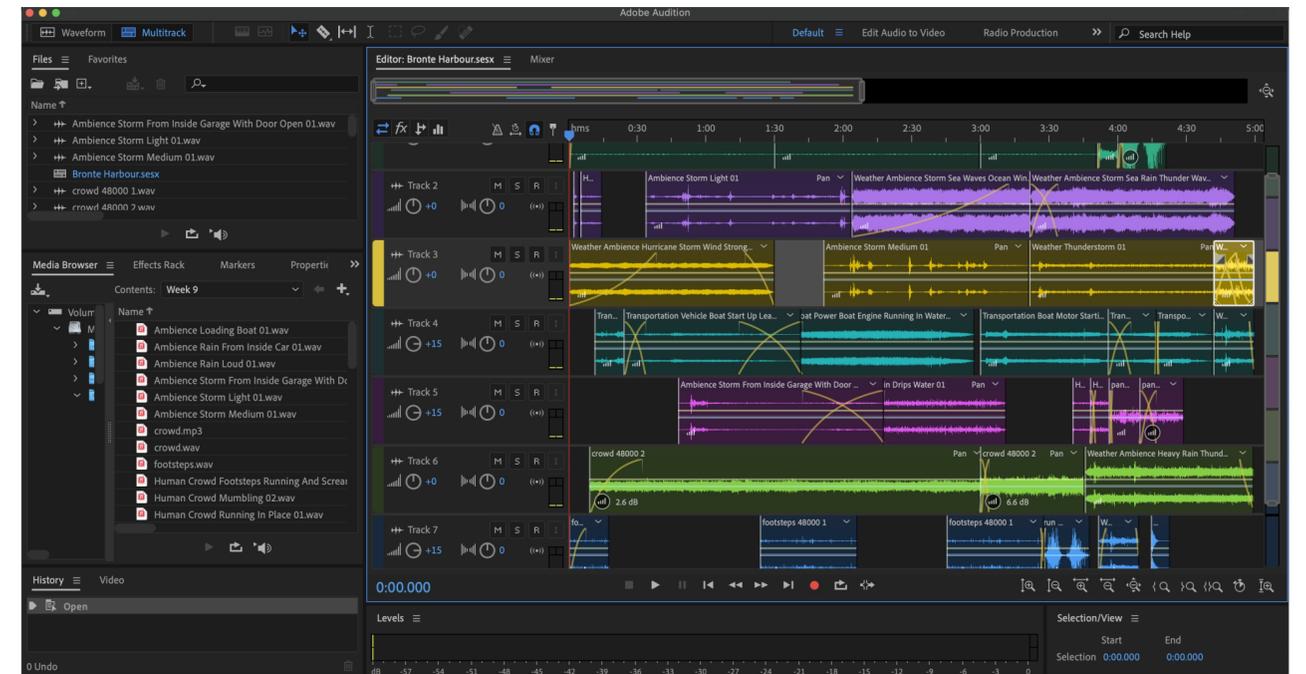
## FINAL DESIGN

# Diegetic Narrative

Drawing inspirations from the professor's suggestions and weekly lectures, I intended to include an audio recording that would put the viewer in that location and time. The memorial tells a story through images and words; it would be fitting to add on another layer as audio. I could not find a recording of Bronte that talks about the fishing industry of the past, so I attempted to piece together a narrative using different sound effects.



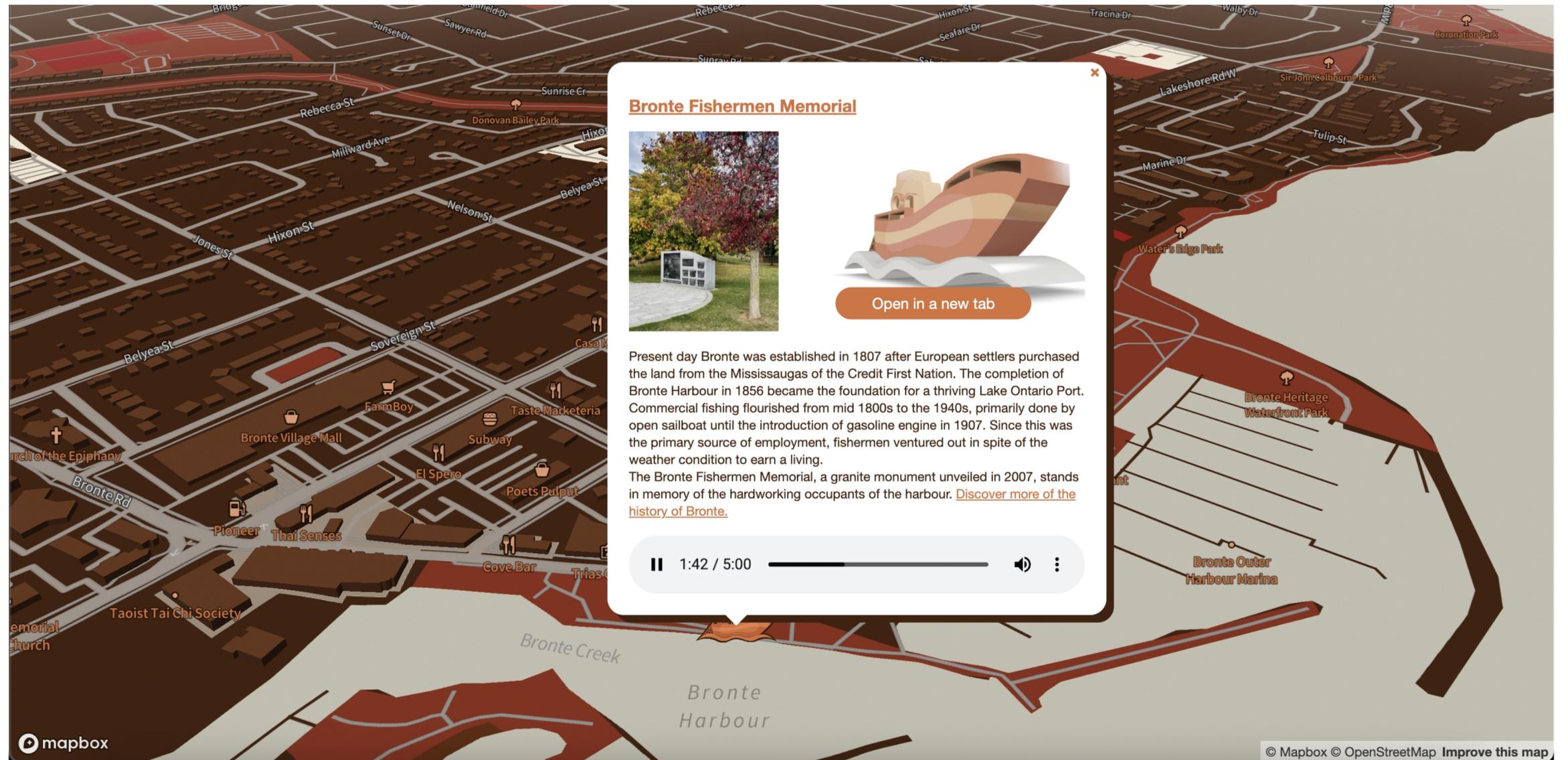
Using Adobe Audition, I compiled recordings from the Adobe Sound Library and Freesound to tell a story of a fishing vessel being severely impacted by storm. There is barely any dialogue; the different combinations of the sounds are the only indication of what is happening. Since the map is pitched to show the 3D buildings, having the icon as a 3D element seems suitable. I could not import a 3D model as an icon in Mapbox, nor display it directly on the map. So, I used the AR activity to incorporate the model. The geolocation is excluded considering I am aiming to bring the experience to the viewer. This would either intrigue people and encourage them to visit the location, or bring the location to someone who could not physically visit it. The model can be viewed on the web and projected into a physical space. To accommodate the AR experience, the pop-up window is made to be responsive between mobile and desktop views.



## FINAL DESIGN

### Diegetic Narrative

When the map is loaded, it would be zoomed into Bronte Heritage Waterfront Park with the custom icon and styling applied to it. Zooming in further, the name of the memorial would appear. Upon clicking on the icon, the pop-up window appears and the audio narrative plays. In addition to the recording, the pop-up contains a picture of the actual memorial, information on the history of Bronte Harbour, and the model of the reimagining of the memorial. The user can interact with the model to immerse themselves alongside the story. On desktop, the user can open the viewer in a new tab to see the model more clearly. On mobile, the user can project the model onto their current space.



Link to the map: [https://ixd544.phoenix.sheridanc.on.ca/Modeling&Materials/Modeling\\_&\\_Materials\\_Module\\_2/bronte\\_map](https://ixd544.phoenix.sheridanc.on.ca/Modeling&Materials/Modeling_&_Materials_Module_2/bronte_map)

## Reflection

While this project is about maps and spaces, my interest is more focused on the history of the location. The project is an opportunity for me to learn more about an area that, on the surface, did not seem that significant. My research centred around the fishermen and the fishing industry, but I was still able to learn about the history of Bronte Village in general and discover ways to present my knowledge visually. I was able to experiment with new mediums and incorporate not only what I learned from earlier this semester but also from the previous semester.

Photography, sketching, and working with Illustrator are already familiar to most students at this stage in the program. 3D modelling was used in the last project and AR was an important component in another class. Google model viewer is straightforward but I did not experiment with it in project 1, so there were some trials and errors until I arrived at the intended outcome. I had worked with audio recordings for first year's Conceptual Process. For this project, I took it a step further and created a narrative from beginning to end. In addition to this being the first time I used Adobe Audition, I had to pay more attention to how all the sounds work together and how to mix them properly. The only unfamiliar aspect of this project was the digital fabrication activity. I had worked with Illustrator and had made physical models before, but never combined them together prior to this project. Nothing is certain until the actual design is cut. Although I thought I had done everything correctly, when I saw the wooden board being cut, I realized where I had made mistakes and understood how the machine accesses my file and uses that information. It was not the outcome I had wanted but the fails and concerns during the process allow me to learn more than if the cut had succeeded.