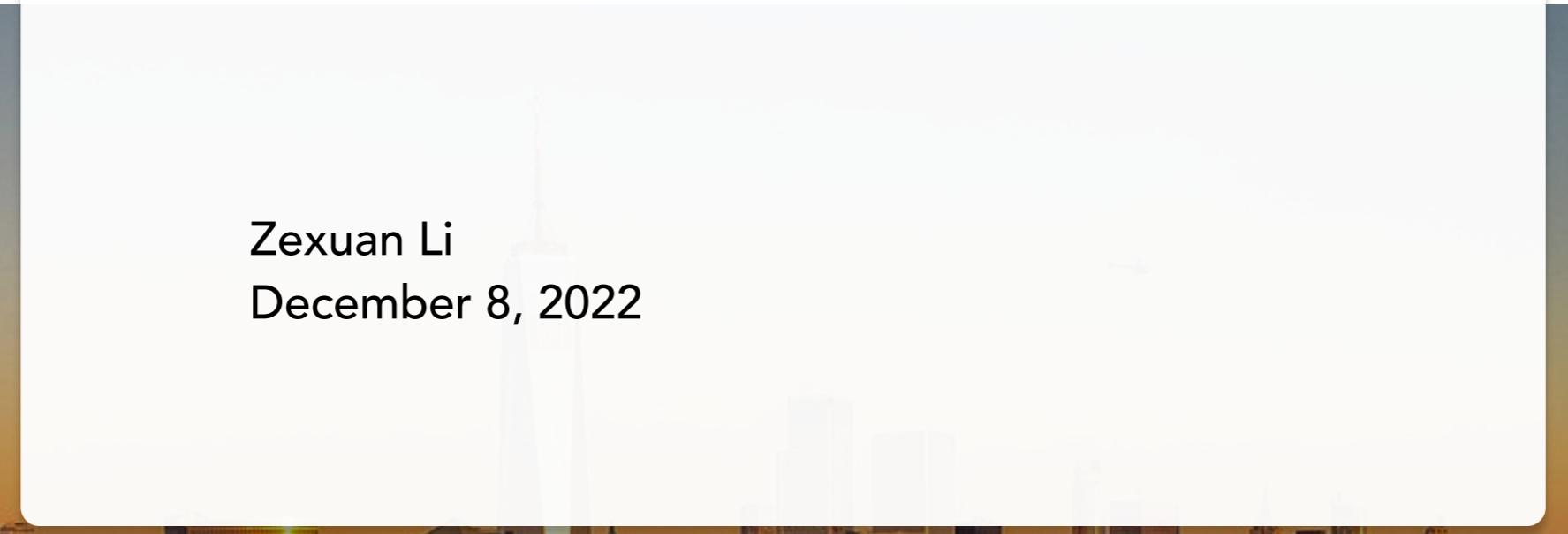
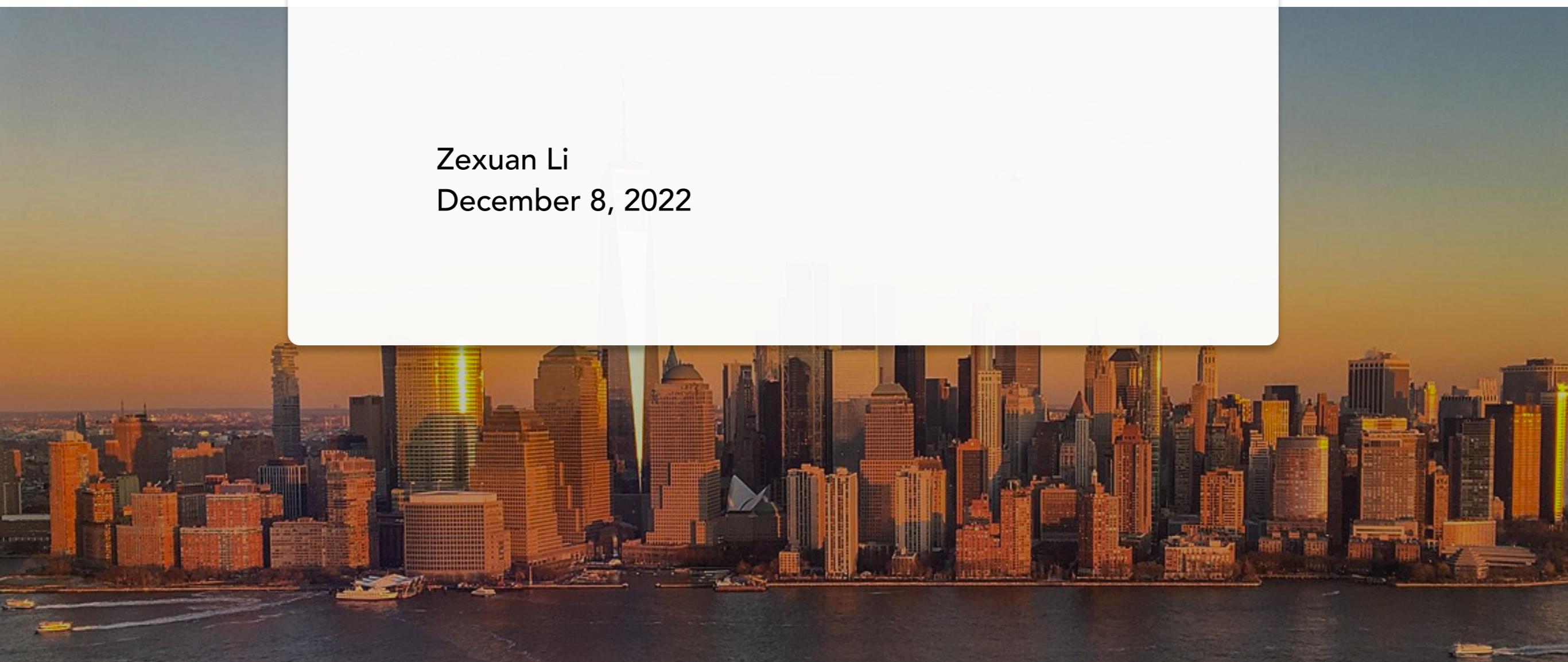


PUI Final Project: Plan Your Layover



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December 8, 2022



Part 1: Project Description

- **What is the purpose of your website?**

This is a layover planning website that allows users to book layover trips from a set of packages. The website aims to improve travel experience by integrating the journey to and from the destination as part of the trip, and **converting the flight experience from a task to be done before the trip begins, to an exciting part of the trip.**

- **What information do you convey with your website?**

The website recommends layover trips based on the flights the user enters, and provides package options based on the location and time the user would have the layover. It also includes the detailed information for each trip package and the locations they would visit.

Part 1: Project Description

- **How is it interesting and engaging?**

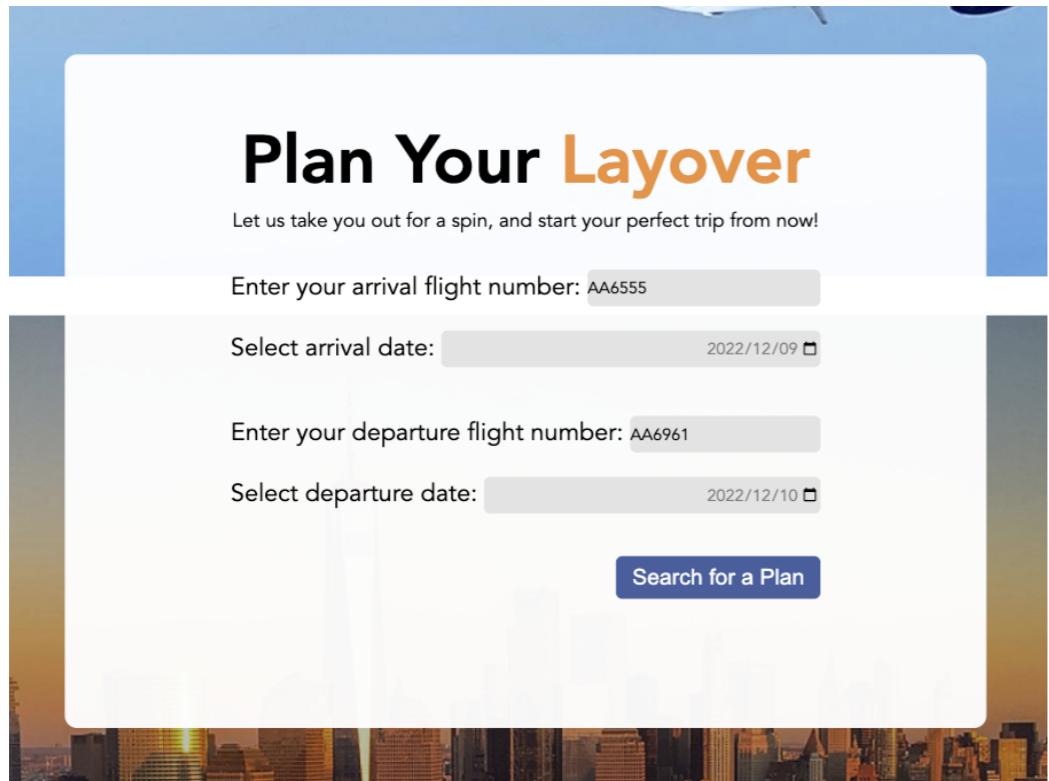
The site is **interactive**, since the user can view the locations they would visit in each package, and click to see the information and pictures about each location. The **UI is also clean and engaging**, with the city image as background for each layover location.

- **Who is the target audience?**

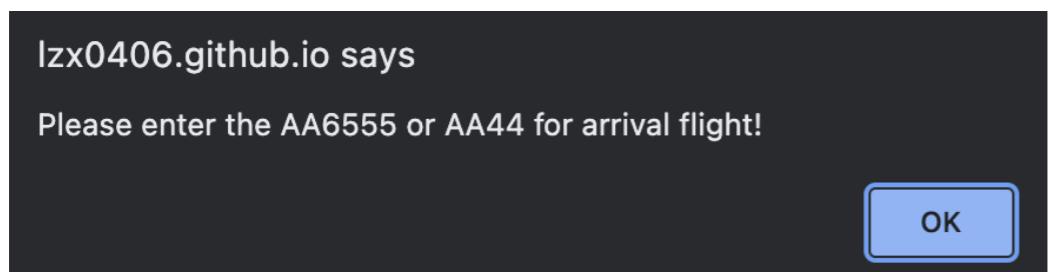
Anyone taking planes with a relatively **long layover time** (more than 2-3 hours), and is **interested in exploring** the city of the layover, or just wants to do something interesting to **spend the layover time** would be the target audience.

Part 2: Interaction Guide

Set the screen size to 1200*850 to view desktop display, and set screen size to 500*850 to view mobile displays. (Content size and map zoom in size change with screen size.)



- Click on the link to the website and go to the landing page.
- Enter the flight numbers suggested in the text box to test. (There are 2 flight numbers suggested in the “arrival flight” box, enter any of them, you will get a pop-up notice if you enter something other than the two flight numbers. You can enter anything for the other parts of the landing page.)
- Click on “Search for a plan” to go to the packages page.



Part 2: Interaction Guide

Set the screen size to 1200*850 to view desktop display, and set screen size to 500*850 to view mobile displays. (Content size and map zoom in size change with screen size.)

Based on your stay time in JFK

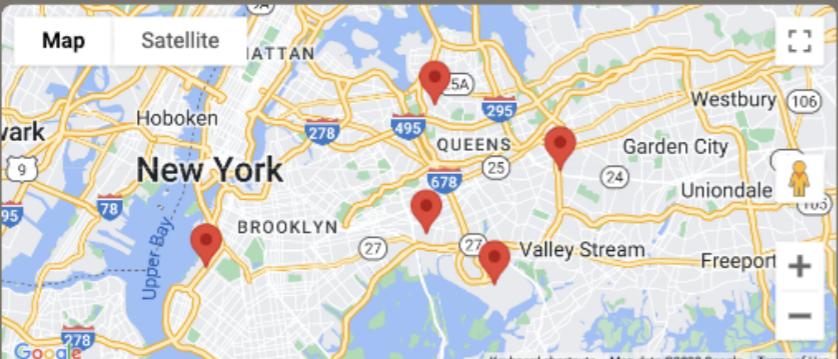
Here is a list of layover trip recommendations:

5 hour city trip

A trip from JFK to:

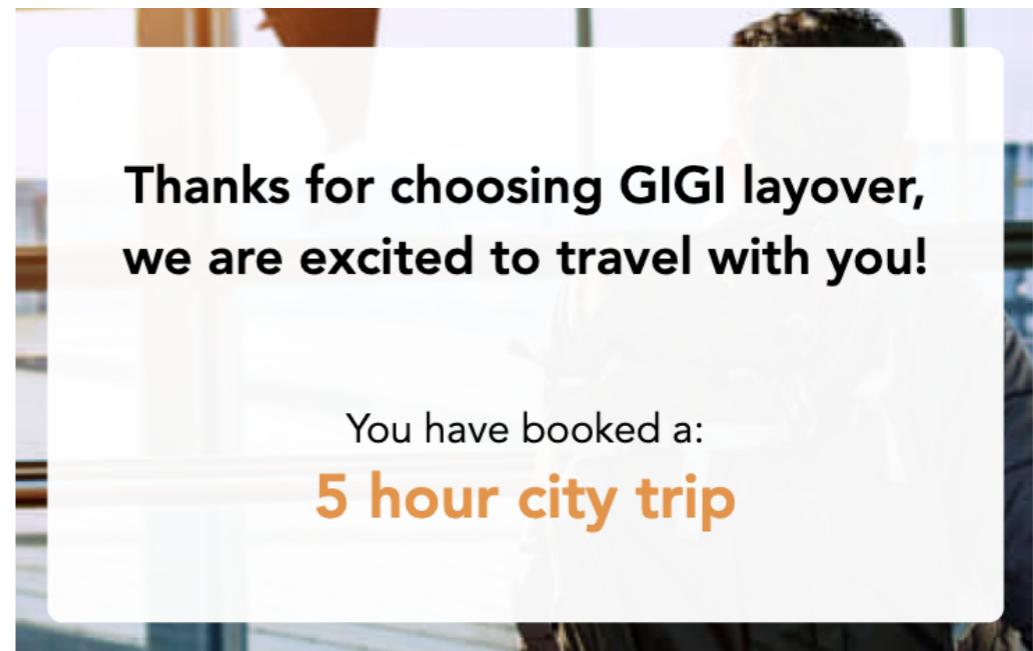
- Resorts World
- Sunset Park
- Queens Botanical Garden
- UBS Arena

Join now to enjoy the best of Brooklyn and Queens with GIGI!!



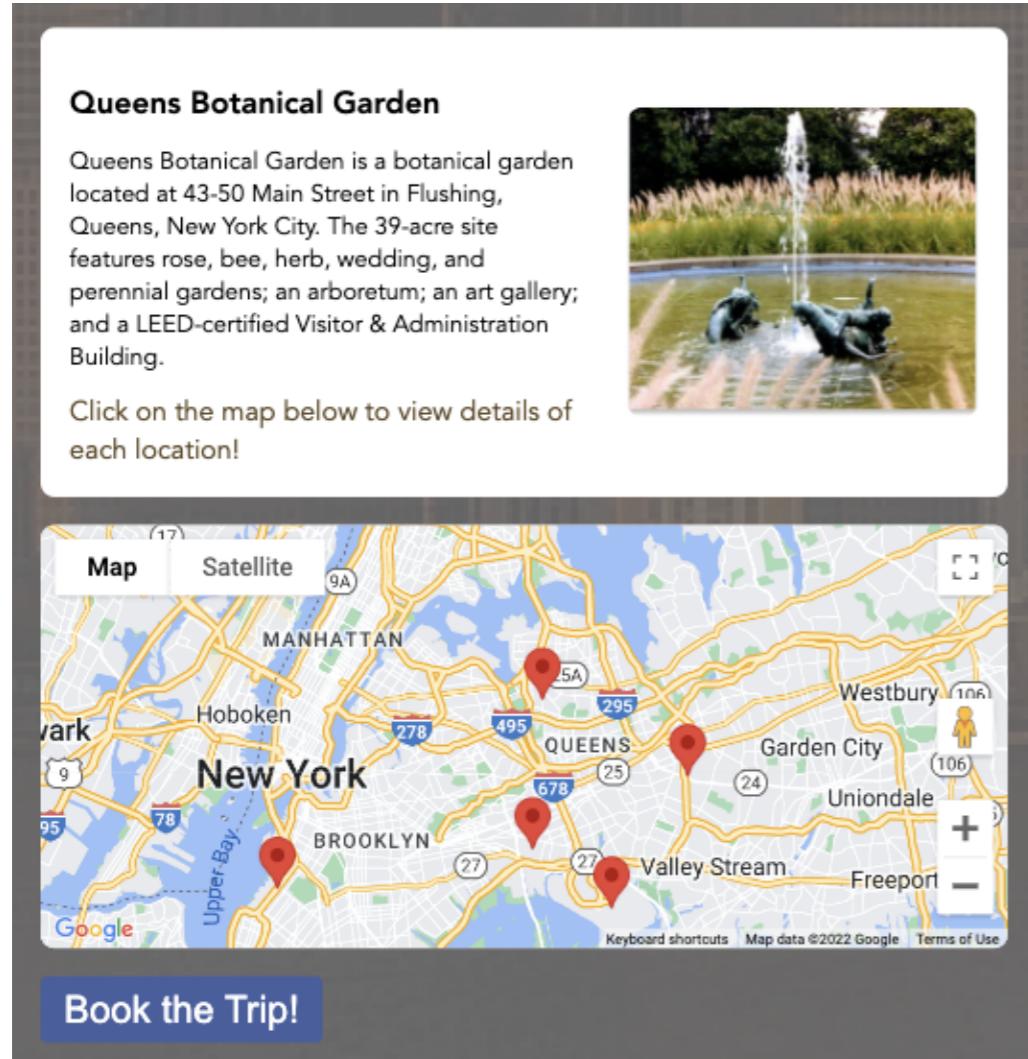
Book the Trip!

- On the packages page, scroll to see overviews of each package.
- On the packages page, click on “Details” to view details of each package
- Or click on “Book the Trip!” to go directly to the booking confirmation page.



Part 2: Interaction Guide

Set the screen size to 1200*850 to view desktop display, and set screen size to 500*850 to view mobile displays. (Content size and map zoom in size change with screen size.)



- When you are on the details page, scroll down to view details of the selected package, and you can click on the markers on the embedded map to view information about each location you would visit.
- Click on "Book the Trip!" on the details page and go to the booking confirmation page.
- On the confirmation page, you can see a message which includes the name of your selected package.

Part 3: External Tool

- **Name of tool**

Google Maps JavaScript API

- **Why you chose to use it?**

I chose it because being able to see the locations that each travel package contains would help users get a visual overall sense of how the trip would be like, setting their expectations. It is also many people's habit to refer to Google Map in different stages of travel planning, so it gives people a sense of control over their trips.

- **How you used it?**

I used it to insert maps with markers in the packages page to give people a visual overview of where they would go in a trip. I also used it to insert map with markers in the details page, so users can click on each marker and view details of that location.

- **What does it add to your website?**

Having a map with clickable markers makes the navigation experience more interactive. With a more engaging and involved navigation experience, users are more likely to order the trips and add revenue to the airline or platform.

Part 4: Iterations

- **HTML & CSS**

My first iteration was finishing all the HTML structure and CSS. It took longer than I expected because I did not realize that when designing, every difference in positions and style would take lines of CSS and different classes/ids to finish.

- **Google Map API**

I first implemented one map following the sample from Map API website, and then wrote many functions to avoid repetitions in adding markers and locations. After that I initialized all 5 maps in the website in initMap function. (in map.js)

- **Javascript**

I reorganized the website to pass in flight information to packages page, package information to detail and confirmation page, so that all the page contents display the corresponding information. An unexpected part for this iteration is that there is a lot of information in different elements on each page, so I needed to figure out efficient ways to change all the content without writing too much excessive code.

- **Accessibility & Style**

I adjusted the website based on results from WAVE (see Appendix), further cleaned my code, and added more comments.

Part 5: Challenges

Honestly, each part of the website implementation took a lot of effort, since I tried my best to adhere the implementation to my designs, and debugging often took a lot of time since my website is mostly functionality based.

Besides debugging, the hardest thing for me was to come up with ways to maximize the efficiency of my code for the packages and maps. I wanted to make my code as clean as possible, so I tried to define the contents once, and use different functions to manipulate all of them in different places.

However, I did enjoy the process of bringing the website to life and thanks to all the help from Venkat!

Part 6: Appendix

Home page WAVE report:

Address: <https://lzx0406.github.io/PUI-project/>

Styles: OFF ON

Summary

 Summary  Details  Reference  Structure  Contrast

 0	 0
Errors	Contrast Errors
 0	 5
Alerts	Features
 3	 2
Structural Elements	ARIA

 View details >

Congratulations! No errors were detected! Manual testing is still necessary to ensure compliance and optimal accessibility.

Address: <https://lzx0406.github.io/PUI-project/>

Styles: OFF ON

Details

 Summary  Details  Reference  Structure  Contrast

-  5 Features
- 4 X Form label 
- 1 X Language 
-  3 Structural Elements
- 1 X Heading level 1 
- 1 X Header 
- 1 X Main content 
-  2 ARIA
- 2 X ARIA 

If an icon does not appear within the page, turn

Part 6: Appendix

Packages page WAVE report:

Address: <https://lzx0406.github.io/PUI-project/packages.html>

Styles: OFF ON

Summary

Summary Details Reference Structure Contrast

☒ 18 Errors	○○ 0 Contrast Errors
⚠ 17 Alerts	✓ 111 Features
⤒ 24 Structural Elements	⤒ 141 ARIA

⤒ [View details >](#)

Address: <https://lzx0406.github.io/PUI-project/packages.html>

Styles: OFF ON

Details

Summary Details Reference Order Structure Contrast

☒ ☒ 18 Errors

- 18 X Image map area missing alternative text

⚠ ⚠ 21 Alerts

- 4 X Orphaned form label
- 1 X Skipped heading level
- 4 X Possible heading
- 6 X Very small text
- 4 X Redundant title text
- 2 X Layout table

✓ ✓ 111 Features

- 6 X Alternative text
- 77 X Null or empty alternative text
- 7 X Null or empty alternative text on spacer
- 2 X Linked image with alternative text
- 18 X Image map with alternative text
- 1 X Language

✓ ✓ 24 Structural Elements

- 1 X Heading level 1
- 4 X Heading level 2
- 1 X Heading level 3
- 8 X Unordered list
- 4 X Inline frame
- 1 X Header
- 1 X Main content
- 4 X Generic region

✓ ✓ 157 ARIA

- 25 X ARIA
- 66 X ARIA label
- 4 X ARIA description

- Note that here all 18 errors are in the Google map API. Most alerts are also from the API.
- All the null or empty alternative text are also in Google map API, since I do not have any images coded on this page.

Part 6: Appendix

Details page WAVE report:

Address: <https://lzx0406.github.io/PUI-project/details> →

Styles: OFF ON

Summary

 Summary  Details  Reference  Order  Structure  Contrast

 0	Errors
 9	Alerts
 9	Structural Elements
 56	ARIA

 View details >

Congratulations! No errors were detected! Manual testing is still necessary to ensure compliance and optimal accessibility.

Address: <https://lzx0406.github.io/PUI-project/details> →

Styles: OFF ON

Details

 Summary  Details  Reference  Order  Structure  Contrast

 9 Alerts

- 2 X Orphaned form label
- 1 X Possible heading
- 3 X Very small text
- 2 X Redundant title text
- 1 X Layout table

 30 Features

- 4 X Alternative text
- 24 X Null or empty alternative text
- 1 X Linked image with alternative text
- 1 X Language

 9 Structural Elements

- 1 X Heading level 1
- 1 X Heading level 2
- 3 X Unordered list
- 1 X Inline frame
- 1 X Header
- 1 X Main content
- 1 X Generic region

 56 ARIA

- 12 X ARIA
- 32 X ARIA label
- 2 X ARIA description
- 4 X ARIA tabindex
- 3 X ARIA menu
- 1 X ARIA hidden
- 2 X ARIA popup

 **UBS Arena**

UBS Arena is a multi-purpose indoor arena located at Belmont Park in Elmont, New York directly adjacent to the New York City limits. Opened in 2021, it is the home of the New York Islanders of the National Hockey League, replacing Nassau Coliseum.

Click on the map below to view details of each location!

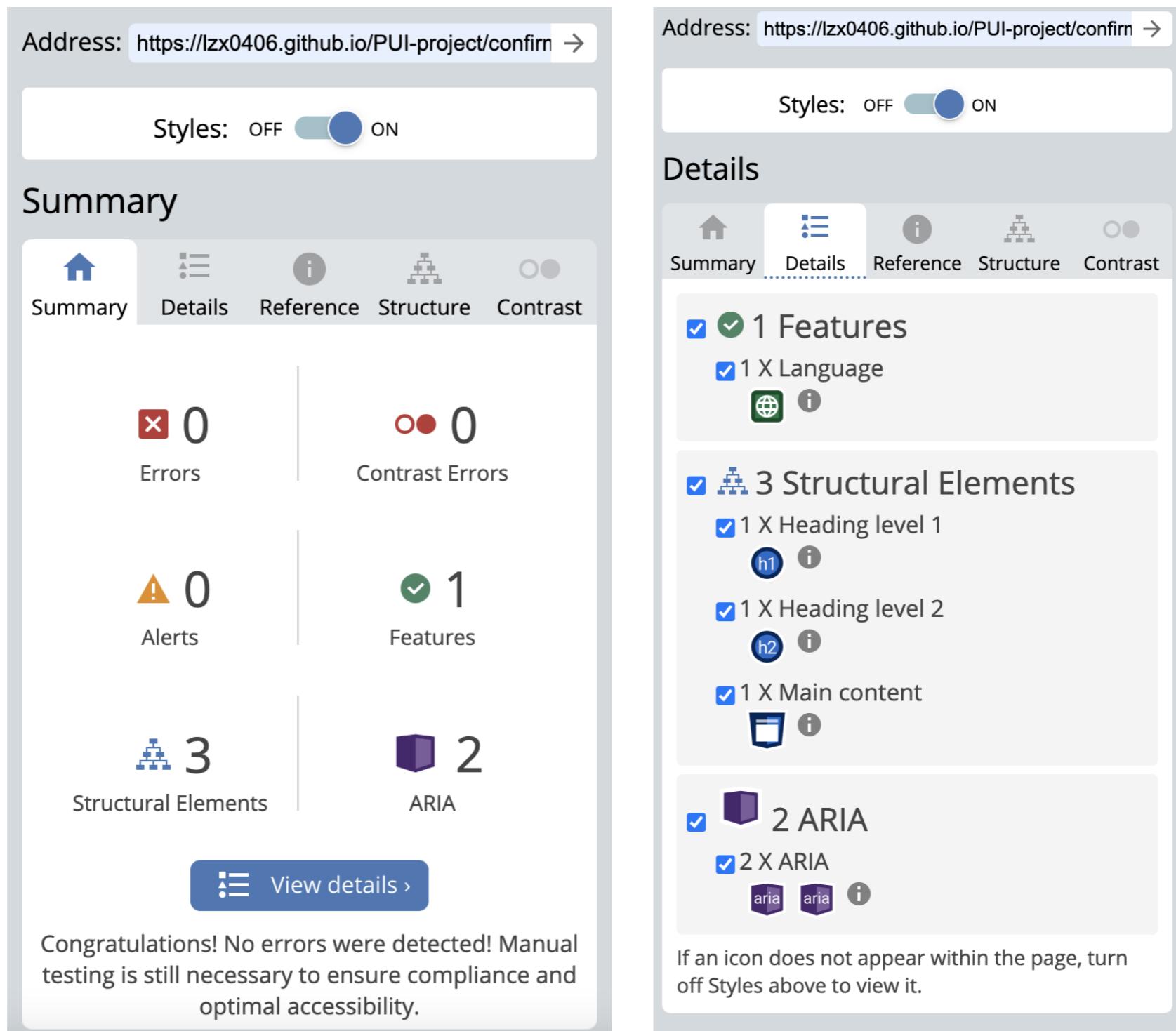


 *An image of UBS Arena at sunset*

- All the null or empty alternative text errors are on Google map API, some of the alerts are also from the API.
- Note that for images I loaded in, I do have appropriate alternative text as shown above.

Part 6: Appendix

Confirmation page WAVE report:



Address: <https://lzx0406.github.io/PUI-project/confirm> →

Styles: OFF ON

Summary

House icon Summary Details icon Details Information icon Reference Building icon Structure Contrast icon Contrast

Red X icon 0 Errors	Contrast icon 0 Contrast Errors
Exclamation icon 0 Alerts	Green checkmark icon 1 Features
Building icon 3 Structural Elements	Blue cube icon 2 ARIA

Details icon View details >

Congratulations! No errors were detected! Manual testing is still necessary to ensure compliance and optimal accessibility.

Address: <https://lzx0406.github.io/PUI-project/confirm> →

Styles: OFF ON

Details

House icon Summary Details icon Details Information icon Reference Building icon Structure Contrast icon Contrast

- Green checkmark icon 1 Features
- 1 X Language World icon Information icon
- Building icon 3 Structural Elements
 - 1 X Heading level 1 h1 icon Information icon
 - 1 X Heading level 2 h2 icon Information icon
 - 1 X Main content Document icon Information icon
- Blue cube icon 2 ARIA
 - 2 X ARIA aria icon aria icon Information icon

If an icon does not appear within the page, turn off Styles above to view it.