Ziyan Tan PUI Final Write Up

Part 1:

The website features an isometric view into my room/workspace. It has intimate/quiet lofi vibes. The goal is to have it be kind of a relaxing background website where the user can interact with some of the items in the room, etc. This is the idea that I eventually went with because I thought it would be visually appealing for a design website, engaging and eye-catching, and show off my personality and my design abilities the most. I wanted to show people that I have an eye for aesthetics but am also a versatile designer who can program difficult animations and do 3D modeling. I wanted to be able to show off my ability to work in 3D in the process of showing people a little bit more about myself. I made it interesting and engaging by programming little interactions on top of it being very visually clean and cute. I even programmed realistic physics simulations into my website! The real purpose of this assignment for me was to challenge myself and learn a new library and to integrate some pre-existing skills that I had like 3D modeling, animation, and rendering. The target audience will be mainly people who would visit my portfolio website in the future. I was planning to add this little interactive scene into an "About Me" page or a website header.

Part 2:

- Chair spinning with realistic physics (click the pink part of the chair slowly to spin slowly, click more rapidly to spin more rapidly)
- Laptop turning on through different screens (click the spacebar on the laptop to change screens)
- Desktop turning on through different screens (click the mouse to change screens)
- Figurine box falling over (click the teal and white box to have it fall over) – reload the page to reset this
- Blue book being pulled out and pushed in (click the book to have it pull out, click again to push it in)
- Black lamp turning on and off (click the bulb)

Part 3:

- Three.JS for animations and interactions, Draco for the model loading, Blender for 3D modeling, rendering, and baking, Photoshop for editing bakes, Spline

- I chose to use Three.JS mainly because I want to learn how to make 3D models interactive on the web. I also followed an excellent tutorial from Bruno Simon who teaches Three.JS journey.

Part 4:

I iterated on my prototypes many times. The first prototypes were mostly 3D models inside Blender and Spline because of the high level of effort it takes to animate 3D models on the web for interactivity. The first time I tried it, there was no lighting or shading. Then I tried to add basic lights into the code programmatically. But then I realized that the Three.JS lights didn't look close to my Blender Cycles render, so I ended up baking my textures in my final product and UV mapping everything by hand and editing the UV textures in Photoshop. I also programmed all the animations and interactions so that the website had more interactivity compared to the prototypes. I think the result looks nice and very close to my hi-fi mockups!
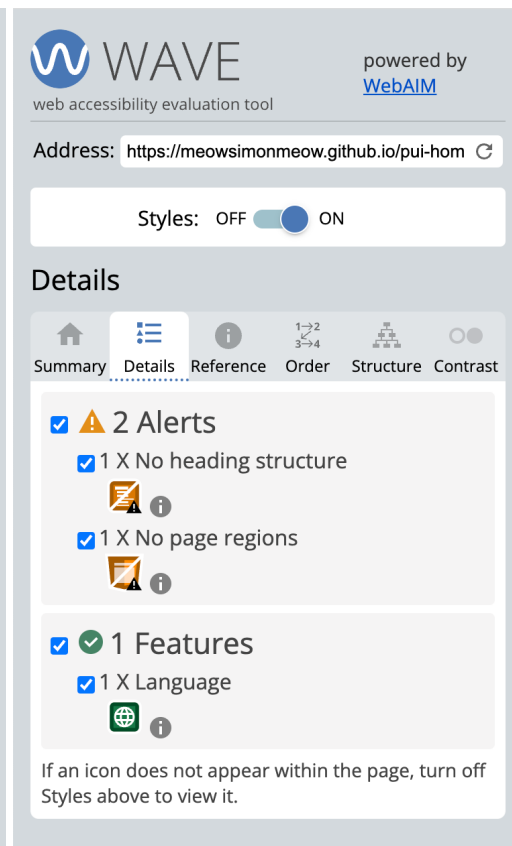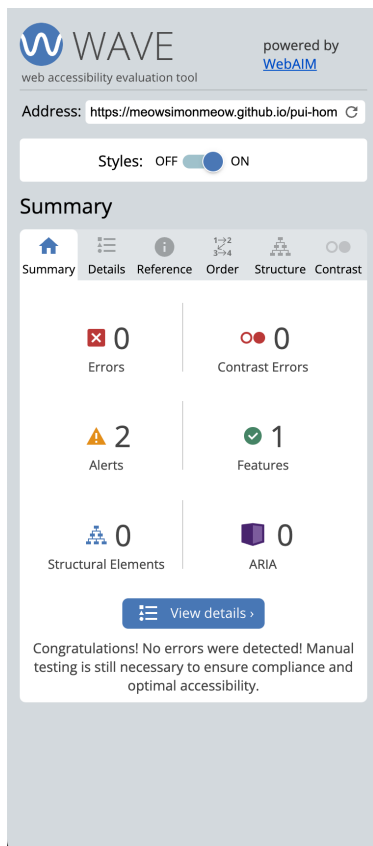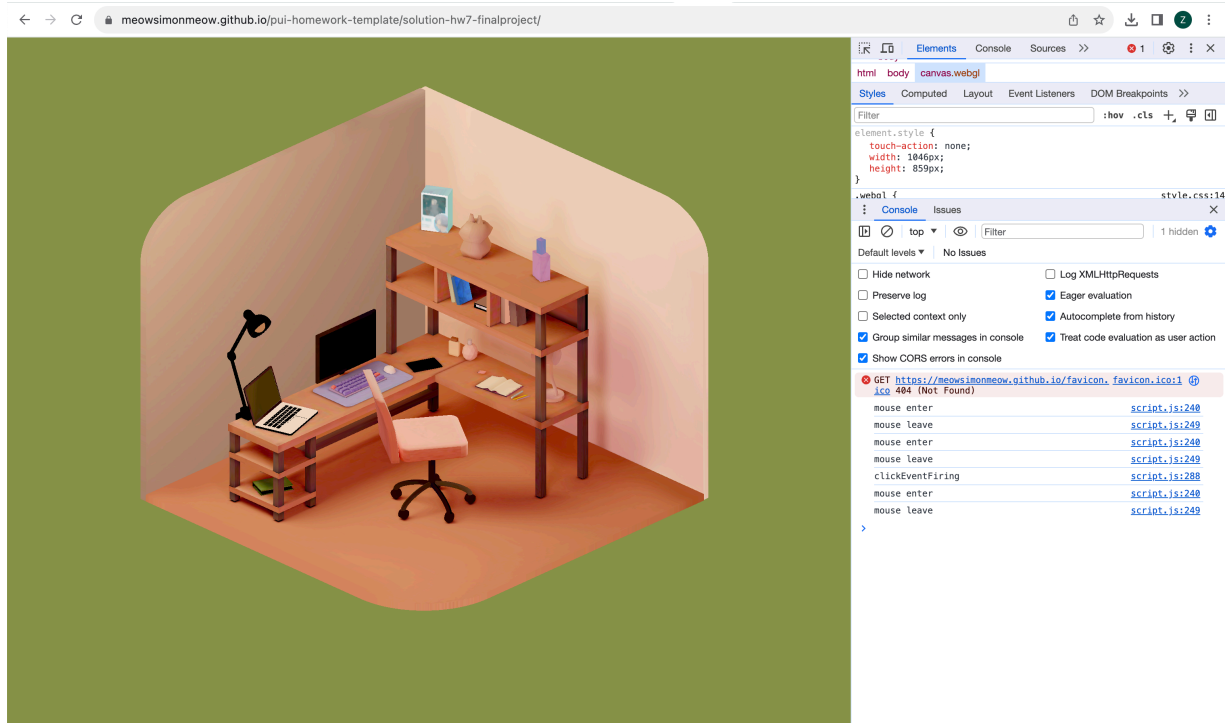
Part 5:

This project was extremely challenging for me because I do not have a coding background, and I think Three.JS is pretty difficult to learn compared to other libraries because of the additional 3D aspect of things. The first challenge was getting the website to look right because of how good the Blender renders looked; I wanted to have my shadows and lights look good on the web as well so that require good UVs and manually editing textures. Programming the animations, especially the spinning chair with realistic physics, was very challenging for me. Lastly, I deployed into the correct Github folder after figuring out how to do it without Node or Vite.

Summary and Details:

Responsive screen sizes:
< 800 and < 400

There are no real errors (I never added a favicon). The console logs are for my debugging purposes for adding future features. I only have one page for this website.

WAVE
web accessibility evaluation tool

powered by
WebAIM

Address: https://meowsimonmeow.github.io/pui-hom

Styles: OFF ● ON

Summary

Summary	Details	Reference	Order	Structure	Contrast

❌ 0
Errors

○● 0
Contrast Errors

⚠ 2
Alerts

✓ 1
Features

⚠ 0
Structural Elements

📘 0
ARIA

View details ›

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

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Styles: OFF ● ON

Details

Summary	Details	Reference	Order	Structure	Contrast

☑ ⚠ 2 Alerts
☑ 1 X No heading structure
☑ 1 X No page regions

☑ ✓ 1 Features
☑ 1 X Language

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

I ran Lighthouse in my console for checking accessibility.