Harvin Park
12/9/23

Final Project Write-up

(1) **Part 1:** In 300 words (only!) describe your website (We will stop reading at 300 words, so please be concise). Include the following:
   - What is the purpose of your website?
   - What information do you convey with your website?
   - How is it interesting and engaging?
   - Who is the target audience?

My final project is an interactive personal web portfolio, that houses a 3-D rendition of my bedroom, ideally with interactive objects that users can click that leads to learning more about me as a person.

I will have a tab for my personal life and a tab for my work information, which will recount the projects/internships/and skills that might best prepare me for any career. By building my own website from scratch, it hopefully also shows my programming and design skills in a way that is fun and interactive.

This portfolio should stand out compared to others by using the 3d functionality: website users should feel like they are inside of a game and have an intimate experience viewing my room through their eyes. Also, small interactions of different pages should feel dynamic and responsive, showing attention to detail.

This project is targeted to future employers and other connections on LinkedIn, who may be checking my profile to see if I am a good fit for someone to work with. While it is a priority to communicate the professional aspects of myself to recruiters, I'm hoping that I'll also stress my interests and personal life, for the friends who might see my website and to humanize me as a candidate.

(2) **Part 2:** Use a bulleted list to describe how a user would interact with your website. For each item in your list, state

- Test in Regular desktop size (1280x720) and mobile size (720x1280)
- To navigate the room, one can grab to click and move to spin the room around. You can also use the arrow keys to incrementally shift around the room as well.
- To go to other pages (Only work page is semi-done), one can use the nav bar in the top. Clicking on work navigates to a second page which comes into place as you scroll. Hovering over skills also pops out a bit in Work. To navigate back to home, click my name on the top right.

(3) **Part 3:** Describe what external tool you used (JavaScript library, Web API, animations, or other). Following the bulleted list format below, reply to each of the prompts. (We will stop reading at the 4th sentence, so please be concise)

- Three.js was the primary library I used to create and manipulate 3D models.
- I used Vite as a build tool to create easy deployments and React functionality as well.
- Some dependencies I also used included react-router-dom, react-three drei and fiber, react-spring, and react vertical timeline component for the timeline.
- Finally, I utilized tailwind-css to streamline the styling process.

- Why you chose to use it? (2-4 sentences max)
  - I chose to use Three.js in order to make an interactive and game-like interface, and Three.js seemed like the best function to create that, but required me to use React. React also has many advantages to the typical HTML,CSS,JS structure by allowing me to create unique variables for each item and write code giving them unique properties.
- How you used it? (2-4 sentences max)
  - Giving credit to three.js tutorials like this which helped me generate physics engines on responsive movement of 3D models and to better get a picture for how DOM dynamics worked in the world of React and 3JS. I used it to discover libraries and learn structure for how things worked, as well as borrow and customize code of difficult functions (such as useFrame of room.jsx which used math to make sliding the screen buttery).

        - I used 3JS to import Sketchfab models of 3D object, including my room, a spacey background, and me (not visible). 3JS also helped light the scene and create a responsive canvas.
    - What does it add to your website? (2-4 sentences max)
        - It makes viewing my room more interactive and fun, so that we can play with it. It also helps to just visualize the room or objects to put it in the DOM and give each one unique properties.

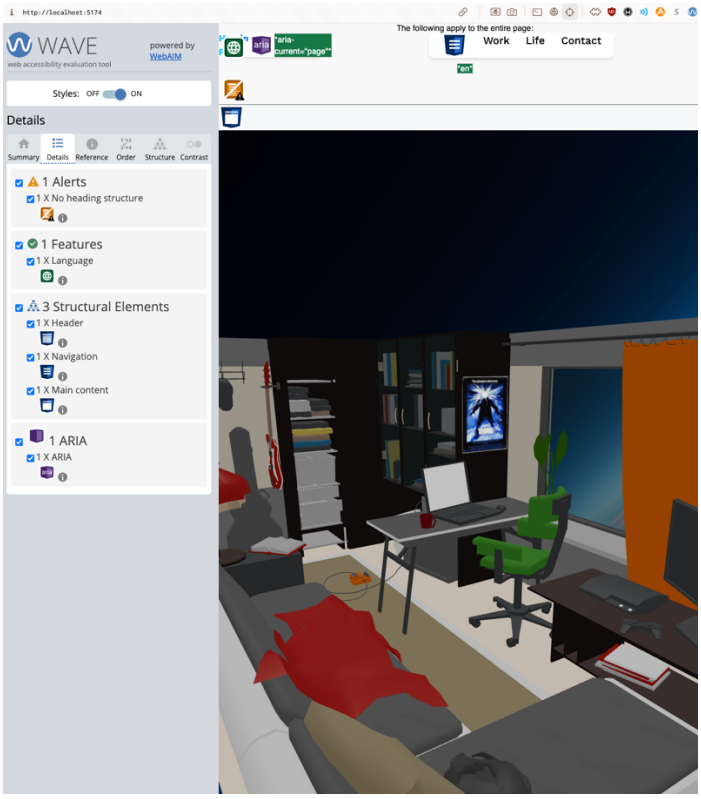
(4) **Part 4:** Describe how you iterated on your prototypes, if at all, including any changes you made to your original design while you were implementing your website. (4-8 sentences max)

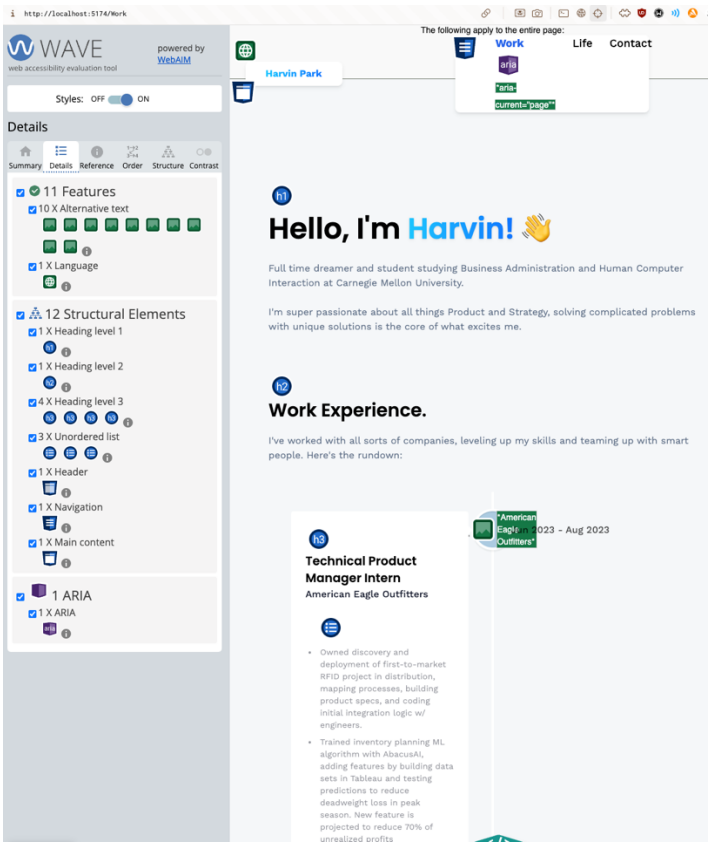
- A lot of iteration occurred in the sense of reducing and extending the scope again and again. For the home screen, I started by simply rendering a zoomed in look at a model of my bedroom, which was static. I realized that this wasn't using our 3D model effectively to show that I put in all the work of I put into 3JS, so I also added drag and drop functionality along with keyboard navigation to rotate and manipulate the model. To help the viewing process I zoomed out and increased the light put on the model in ThreeJS, along with putting in a cooler space background that made the room seem like it was floating in space. For the work screen, I started off by just putting in text as I might in a my word resume, and then looked for CSS libraries/modules to help make my work experiences pop more. I found a timeline feature to make this presentation more buttery and responsive, and then iterated the content inside.

(5) **Part 5:** What challenges did you experience in implementing your website? (2-4 sentences max)

- The single largest challenge I faced was the process of learning React from scratch, as it made debugging and converting ideas into DOM elements a very slow learning curve. Beyond that, I think the fickleness of 3D elements was hard to work around. How can I place a 3D object on a 3D plane and make it responsive to multiple screen sizes or easy to navigate? It required a lot of camera, lighting, and positional trial and error to make things work.

Appendix:


http://localhost:5174
WAVE
web accessibility evaluation tool
powered by WebAIM
Styles: OFF ON
Details
Summary Details Reference Order Structure Contrast
1 Alerts
1 X No heading structure
1 Features
1 X Language
3 Structural Elements
1 X Header
1 X Navigation
1 X Main content
1 ARIA
1 X ARIA
The following apply to the entire page:
Work Life Contact
aria
"aria-current="page""
"aria"


http://localhost:5174/Work
WAVE
web accessibility evaluation tool
powered by WebAIM
Styles: OFF ON
Details
Summary Details Reference Order Structure Contrast
11 Features
10 X Alternative text
1 X Language
12 Structural Elements
1 X Heading level 1
1 X Heading level 2
4 X Heading level 3
3 X Unordered list
1 X Header
1 X Navigation
1 X Main content
1 ARIA
1 X ARIA
The following apply to the entire page:
Work Life Contact
Harvin Park
aria
"aria-current="page""
h1
Hello, I'm Harvin! 👋
Full time dreamer and student studying Business Administration and Human Computer Interaction at Carnegie Mellon University.
I'm super passionate about all things Product and Strategy, solving complicated problems with unique solutions is the core of what excites me.
h2
Work Experience.
I've worked with all sorts of companies, leveling up my skills and teaming up with smart people. Here's the rundown:
h3
Technical Product Manager Intern
American Eagle Outfitters
"American Eagle Outfitters"
2023 - Aug 2023
Owned discovery and deployment of first-to-market RFID project in distribution, mapping processes, building product specs, and coding initial integration logic w/ engineers.
Trained inventory planning ML algorithm with AbacusAI, adding features by building data sets in Tableau and testing predictions to reduce deadweight loss in peak season. New feature is projected to reduce 70% of unrealized profits