Introduction

This year, I learnt a lot about web development. When I started Interactive Media, I felt confident because I had prior knowledge about HTML and CSS. However, in Semester 1, I realised that what I knew about making websites was very limited and at times incorrect. I learnt that HTML files must be formatted with the correct semantic markup and my website is not just meant to look pretty but it also needs to be functional, responsive, and accessible. In Semester 2, I learnt that the user is a very important part of the design process. Everything I do, as the designer, should be aligned with the kind experience I want users to have. After working on my Brooklyn Nine-Nine fan website, I believe that I have grown in my skills as a designer and programmer. In this essay I reflect on my design process, the challenges I faced, and overall, what I learnt about being a web developer.

Global Economics and Artistic Implications

When building my website, I prioritized two global economic factors: sustainability and accessibility. For sustainability, I made sure that a majority of my images and videos have small file sizes. This is because having a small file size reduces the amount of mobile data consumed by the website, which means that the user won't have to spend lots of money to buy extra data. It also helps the user save electricity because it reduces the amount of power that is consumed by their device. However, the implication of this is that my images and videos will have lost a bit of visual quality.

For accessibility, people from all over the world will be able to find my website because I used Technical and On-Page Search Engine Optimization (SEO). With Technical SEO my website loads relatively quickly, it has a secure URL scheme (https) and it's fully responsive (Pol, 2023). I used On-Page SEO in my HTML files so that all images to have descriptive names, title tags and alt tags. Also, in each HTML file I used metadata, header tags and correct semantic markup (Lyons, 2022). The implication of this is that my website has a good layout which will remain consistent across multiple devices and web

browsers. Altogether, these techniques made my website globally sustainable and accessible.

UI/UX Decisions

Meaning-making

My website has a minimalist design. It uses only two fonts, has a simple, intuitive navigation, and I only used animations for specific contexts such as, hover effects, glow effects and page flips. My website also uses margins and white space so that the user is not overloaded by seeing too many elements on the screen. Furthermore, for my colour palette, I used four main colours, navy blue, brown, yellow, and tan. The darker colours (blue and brown) are used for the headers and footers and the lightest colour (tan) is used for the page backgrounds. This is so that the page content is visible and readable as well as to make the different sections distinguishable from each other. Yellow is a light colour and at times visually inaccessible therefore, I made sure not to overuse it and only use it for the logo and as an active page indicator on the nav menu. Altogether, these UI elements will give the user a good experience because the website content will be accessible and understandable, and they will find the website familiar when they notice things they have seen from other websites.

My data visualisations also have a good use of Information Architecture. The data in each graph is organised by colour, size and category. This helps the user understand that if a data point is orange, it is related to the other orange ones or if a circle is larger than the others, it represents a large amount of data. This is similar to the labels, tooltips, and keys. In my scatterplot graph, the labels tell the user what each axis represents i.e. the y-axis has ratings and the x-axis has the number of episodes in the series. The tooltips help the user make sense of the data. While going through the graph, the use can hover over a dot and find out what episode it represents, what season it falls under, and what rating it has. The key then helps the user make sense of the graph as a whole i.e. brown represents plot points for Season 1 and yellow represents Season 2 etc. Lastly, my data visualisations also have a navigation system. Instead of having to look at the entire graph, users can search for an episode number, a season, or a rating and that information will

be highlighted. This means that the user will be able to make sense of the graph, and the information presented to them without feeling confused or overwhelmed.

Engagement

I used bold colours for my homepage to capture the user's attention and to make them eager to see more. On the other pages, I used softer/lighter colours to avoid overstimulating the user with too many bold colours. On each page, I also added images to accompany paragraphs. The images are meant to illustrate certain points made in the text such as diagrams or screenshots in the Design and Theory pages. These keep the user engaged because if the user becomes desensitised from seeing lots of text, they will have something more interesting to look at. With my data visualisations, users become engaged by the use of colour, the shape language as well as other interactive features that will be expanded on in the next section. Overall, on my website, I keep users engaged by piquing their interest and giving them a chance to take breaks from reading lots of text.

Interactivity

Interactivity plays a huge role in my website. It allows users to be active participants instead of just passively consuming the content. The first point of interaction that users can find is the nav menu. This gives the user the ability to click on a specific tab and open the page that corresponds to that section. Before they even click on the tab, while they are still hovering, the text element goes from white to grey. This shows them that their action was acknowledged and once they click on it, the text turns yellow to indicate that they have successfully opened the page. The next points of interaction are the social media icons found on the footer of each page. When the user hovers over an icon, it has a white glow and when they click on it; it opens a social media page that corresponds to that icon. The next point of interaction is the newsletter subscription form found on the About Page. Users are able to enter their information and submit the form to subscribe to my newsletter. While entering their information, they will receive alerts so that they can fix any errors, and they will also be notified for a successful submission. This interaction involves a lot of communication with the user which shows them that their actions are valued, and they can affect change within the website.

The last points of interaction are the buttons found in my bubble chart and the key from my scatterplot graph. Firstly, my bubble chart has a “combine” and “split” button and these are used to combine or group the bubbles (seasons) according to the number episodes they have as well as splitting them according to their ratings. This is interactive because the user’s actions are changing the chart. It also helps them interpret the data because if for some reason the user cannot see the colours, that visually group the bubbles, the buttons help them make that connection. Lastly, in my scatterplot graph, the user is able to hover on a circle in the key, and the plot points that correspond with it will be in colour while the rest of the graph has reduced in opacity. This is useful because the graph has lots of dots and colours so being able to select which data to focus on helps the user understand what they are seeing.

Challenges

The first challenge I faced when making my website was creating the data visualisations. This was really difficult because I was used to following tutorials from class and I never got the time to practice on my own. I knew how to fetch data from the API and the style the svg but I was unsure of how to actually create the visualisation. Therefore, to create the bubble chart and scatterplot graph for Assignment 3, I relied heavily on YouTube videos and the code that we created from our tutorials in class. After watching all these videos and referring back to the class content, I was able to create the third data visualisation (heatmap) on my own. I did, however, refer to YouTube to learn how to add additional things such as the search field and how to animate my data. This challenge taught me that practice is really important because the more I practice something, the better I am when it’s time to actually do it.

The second challenge I faced was creating a narrative for my data visualisations. In my bubble chart for Assignment 3, I wanted to show that Brooklyn Nine-Nine had lots of episodes. I did this by having bubble size represent seasons and their number of episodes. I also added a split and combine button which brought the bubbles closer or apart from each other. Visually, the chart made sense but there wasn’t really an emergent narrative. Therefore, for the final version of the chart, I decided to put these

buttons to use. When the split button is clicked, the bubbles, separate according to their ratings and when the combine button is clicked, the bubbles with the same number of episodes move closer together. This creates the narrative that seasons with many episodes have the highest ratings meaning that, the later seasons of Brooklyn Nine-Nine had lower ratings because they had fewer episodes.

The final challenge that I faced when developing my website was making it fully responsive. Generally, responsive design is not difficult for me because I know how to use media queries and the developer tools. However, I used to find it easy because I could only focus on three screen sizes. I had a preferred desktop and tablet size and for the mobile I used my phone's specifications so that I'll be able to view my website from it. However, because we have to make our websites fully responsive, I knew that I would have to do a lot of work. Therefore, I looked for techniques to make the process less tedious and more effective. I found out that I can first reduce the size of the body so that everything within it can fit its new context. I can then reduce the margins by 50% for tablets and 25% for phones. I also learnt that images should be set to 100% so that they can automatically resize themselves. Overall, these tips made my responsive design process easier and a bit faster than before.

Professional Practices

After reflecting on my process and all the design decisions that I made, I firmly believe that my website aligns with professional practices in international web development. According to a blog post from the Software Development company, TatvaSoft, the best practices for professional web development are:

1. A Good Navigation System
2. Keeping Everything Separate - CSS, HTML, and JavaScript
3. Writing Smart Codes
4. Testing While You Build
5. Having Good Performance/Speed
6. Maintaining the Standards
7. Considering Compatibility Across Multiple Devices

8. Providing a Great UX (Sharma, 2022)

My website has met all of these requirements. I have a good navigation system that users will find intuitive. My HTML, CSS, and JavaScript code are separated, and I also provided comments to explain what I wanted to do. While building my website, I kept checking to see if things were working and I regularly uploaded my changes to GitHub. Moreover, my website content and images are optimised so my site loads quickly. My website follows the conventions of a regular website such as having a logo and menu at the top and a footer at the bottom, therefore, users will find it familiar. Lastly, my website is fully responsive so users from all over the world will be able to use it. All of these come together to provide a good user experience, and this shows that my website does align with professional practices for web development.

Word Count: 2082

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