

CS320-103: Software Engineering, Spring Semester 2022

Individual Project Proposal

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<React.js Portfolio Website/>

Summary:

The portfolio website will be a showcase of my front-end web development abilities as well as other projects that I have done. The focus of the project is to learn and implement React.js. The site will be very modern, clean, and heavily animated. It should also meet all these specifications across platforms so that it will look elegant even on a device such as a phone.

After completing the project, I expect to have created a portfolio capable of showing off both my programming abilities and my other engineering projects to hiring managers, companies, etc. via a website that stands out from the competition.

Technologies:

The development environment will be Visual Studio Code (VS Code) and/or Brackets depending upon the usability of git and the ease of use for each IDE. In order to work on the project in an agile manner, Git will be used for version control. This is crucial because I will likely make many mistakes throughout the process and will need to revert to previous versions as I break things.

To make the website stand out, I will be learning React.js, developing the site with it, and using it to animate the site. I may also need to learn about SASS and CSS animation, but this is not the focus. Other libraries, including but not limited to react-animations and react-spring, will be used to make the animations and make elements move in a natural manner. Other JavaScript libraries may be used as well on a feature specific need basis.

Finally, I will use Adobe Photoshop to create icons/logos, background images, etc. All the images that I use on the portfolio site will need to be created from the ground up. I may need to make many versions of each image so that the animations can function properly depending upon the complexity. This should be the most straightforward portion of the project taking up the least amount of time.

Development Plan:

The main sources of information for this project are React.js documentation, W3Schools React.js tutorials, and YouTube video tutorials/example projects. I will also use documentation

from React.js add-ons and other libraries. These sources should provide all the material that I will need to learn React.js. If any seemingly unsolvable questions or issues arise, StackOverflow may be considered as an additional source.

In general, the development process will follow these steps:

1. Develop a rough sketch of the website
2. Research React.js and learn the basics
3. Create a prototype with some basic styling and animation such as fading-in (MS1)
4. Design necessary images
5. Learn about more complex animation different libraries
6. Most of the website should be complete with some level of animation (MS2)
7. Highly animated, complex, and complete portfolio site (MS3)

Challenges:

I expect to face many challenges such as the steep learning curve with regards to animation. I have never tried to animate a website other than built in animations in Bootstrap and very basic hover animations in CSS. In addition, I have not used any JavaScript framework or library in my life. Since this is so new to me, I expect to find myself confused and lost at times, but because of the vast number of resources on React.js, I believe that I will be able to solve any issues that I face.

The second challenge that I expect to face is time management. I have always struggled with managing my time and I tend to either procrastinate or become so engrossed in a project that I neglect all other responsibilities with no in-between. While this is not a new issue for me, it is a quite difficult issue for me to solve. To overcome this issue, I am using google calendar to schedule my time which should help me to maintain good work and study habits.

Another issue that I am expecting to face is making everything work correctly across different devices, specifically on phones. It is difficult to create a responsive website that is without issue. I am sure that many times I will have to change my approach or learn new work arounds so that the site can be displayed properly on smaller devices.

Finally, I may face an issue related to the scope of the project. Because I have never taken on a task of this magnitude by myself, I am not entirely sure that I will be able to accomplish everything that I set out to do. While I may fail at completing some aspects of what I envision, I will always continue to learn throughout the process and do everything that I can to have as perfect of a final product as possible. The scope of this project is very large, and I have much to learn, but I am confident that I will do my best and have a good result.