

Individual Capstone Assessment

As I have drawn closer to the completion of my college curriculum, I have found myself learning many skills. Between the soft skills I learned through a variety of areas and the technical knowledge I acquired through co-op experiences and my degree path, I believe that I am much more knowledgeable than before. Therefore, I would like to apply that knowledge to a more cohesive, complete project. While I have dabbled in web development throughout prior classes and co-op experiences, I have never used the React framework in a project before. React is a common and valuable-to-know tool, so I will happily take this as an opportunity to invest time into learning its syntax and conventions. Also, it will allow me to work on a site with an interesting theme, being music discovery, making for a promising experience.

In terms of college curriculum, several computer science courses I have taken will allow me to better contribute to this project. Through taking CS-2028C Data Structures, I became better prepared to handle abstract classes and data types, and generally better understand how to follow the flow of code. While this project will be primarily coded in a different language and format than was taught in Data Structures, the skills I obtained from the class have translated to a better aptitude for understanding new code structures as well. Along with this, EECE-4029 Operation Systems & Systems Programming provided me with a more complete understanding of resource allocation and computational limits, providing me with potential insight on a wider variety of potential issues. Thirdly, from my experiences in EECE-3093C Software Engineering, I developed a much greater understanding of proper software engineering practices and methods. I feel that this class most directly prepared me for many of the upcoming challenges with this project, as it simulated similar situations as I may run into and discussed ethics and design principles.

For my first two co-op semesters, I was a Service Desk Analyst at Ohio National Financial Services. In this role, I almost exclusively provided first-line technical support to other employees and outside agents that used the company's software. While this did not provide me with much web development experience, the problem solving skills I learned, and the experience using and updating the knowledge base system, will still certainly be useful heading into this project. My second co-op role was as part of the Strategic Student Program at Siemens PLM Software. Through working with AngularJS in my first semester, I learned the most directly applicable web development skills to learning React, including information about the view model and dynamically updating site data. In later semesters, I primarily worked on designing and developing unit tests to support the company's major software, which helped me to learn the ability to look at code as a bigger picture and highlight the importance of debugging and code safety features.

Like many, I am always searching for new music, and would personally appreciate having a seamless and dynamic way to do so. Also, after working with web development in the

past and seeing the popularity of React, I was interested in further exploring the framework. Therefore, I was happy to agree to creating a website based on discovering music. After some digging around, it became clear that the Spotify API was a great option to use to implement this. From here, my team and I brainstormed and decided to create a speed dating-style site. In other words, this project will generate new music based on a variety of options, present it to the user, and allow them to save their liked songs.

By the time we are finished with this project, I anticipate that we will have a working app that allows users to log in through Spotify, find music based on their favorite songs and other options, and save those songs to a newly-created playlist. More specifically, the site should autoplay snippets of discovered songs, and allow the user to swipe left or right to dislike or like, respectively. Also, I would like to add some level of infographics or other analytics, so that users can see information about what types of songs they like and dislike. I will evaluate my contributions based on the significance of my design and codebase contributions, as well as the knowledge gained over the semester. I will know we are finished with the project when it offers a relatively seamless experience to find new music. Also, this completed project will ideally be bug-free and not have any potential security issues.