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CS5001

Individual Capstone Assessment

Throughout my time at the University of Cincinnati, my classes and personal projects have provided me with endless new knowledge; much of this bled over into my real-world co-op experiences. For me, the goal of this project is to merge a bunch of these concepts and skills into a project. For example, I have never created a web application from scratch using React Framework despite working with it daily during co-op rotations. On top of applying skills I've learned, the product for this project provides me with a service that I will use regularly. I spend hours a day listening to music, so the end goal of this project is a web app that allows users to quickly discover new music tailored to their preferences.

Course curriculum plays a heavy role in my capabilities to accomplish the goals of this project. For example, as early as freshman year, I was taking courses that reinforced my programming skills such as ENED1100. Not only was I able to develop skills, but it also exposed me to new languages and applications for programming. Another class that has come in handy during this process so far is Technical Writing, ENGL4092. When composing pieces like this essay, or the Design Diagrams, I revert to the conventions and techniques acquired from that class. Our group intends on adding something like a database of user data into our web application. Fortunately, I have experience creating and querying databases from CS4071, Database Design and Algorithms. During this class, I got my first exposure to SQL. This laid the foundation for my current knowledge and experiences accessing databases. Another staple to any application or programming assignment are data structures. Utilizing structures properly allows for easy, efficient solutions to potentially complex problems. One example of a data structure I have already implemented is a queue. We create a queue of new music for our users to swipe through and enjoy. I'm sure there's many more examples of applying knowledge from all of my courses, but I'll end it here.

In addition to my course work, my experience working at Tenet3 Cybernetics played an incredibly influential role in the scope of our groups project. During my first few rotations at this company, I was not doing frontend dev work, rather Quality Assurance and Testing. These semesters did not help me directly with the work I've done so far on this project, but it did help me identify and pin down bugs. This will, and already has, proven useful when writing inevitably buggy code. However, the most recent few rotations provided me with more relevant skills for this project. Taking on new responsibilities as a Frontend Developer allowed me to get my hands on new technologies and work beyond my comfort zone. Some of the skills I learned include programming in JavaScript, using React to build a website, and CSS styling to name a few. Each day of work consisted of me creating new components to fulfill a feature request, or parsing JavaScript to hunt down a bug filed in a report. Using a combination of all the skills I've learned so far, hopefully my team and I can create a meaningful, useful product.

With music and programming consuming a decent amount of my free time, I decided there was no better project idea then to combine the two. After finding some peers to group with, we

brainstormed potential ideas. One path that caught our attention was music discovery. There are so many songs I could listen to on repeat, but I am always on the hunt for new music to add to the collection. This project idea excites me because I anticipate using it frequently to discover new music. After explaining the project to friends, many of them expressed interest in using it themselves.

Spotify provides great resources for developers. A showcase of developers' projects inspired us to pursue this path. The underlying idea behind our project is to create a new music discovery app that uses the left swipe/right swipe aspects from a popular dating app. We plan on incrementally working towards are larger goal by breaking the project down into smaller tasks. Completing tasks not only gives a sense of progress, but also allows for constant testing and bug fixing. I will know if I have done a good job when I reach a point where I have an app that I use frequently and never find myself wanting a feature or struggling to get results. I will be satisfied when I have created my new favorite way to find new music.