Jacob Senior

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Professor Sanford

CS 499 Computer Science Capstone

Milestone Two Narrative

The artifact that was enhanced for this milestone was originally a Python web application concept for Grazioso Salvare. Grazioso Salvare was a mock company that needed a web application to read and filter data from their database. This artifact was originally created in February of 2024 while taking CS 340 Client Server Development at Southern New Hampshire University.

The enhancement I performed on this artifact was transferring the project to Java, using the MEAN (MongoDB, Express, Angular, and Node.js) stack framework and integrating a RESTful API. I chose to include this project in my ePortfolio for several reasons. For one, this kind of project demonstrates a wide variety of my skills as a computer scientist. For example, experience working with powerful languages and frameworks, and the ability to design and develop scalable and easily maintainable software. This project is also a good concept for kickstarting my career as a software engineer. Since the project provides a concept application that is frequently used and required for many companies to operate, it would be an attractive piece for gaining attention from smaller companies looking to develop a similar web application. I value this attention from smaller companies as it provides great potential for allowing me to get a footing in the computer science field and gain experience. Additionally, this project would aid me in achieving proficiency in two of the course outcomes; employ strategies for building collaborative environments that enable diverse audiences to support organizational decision making in the field of computer science, and demonstrating an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals (software engineering/design/database).

This enhancement was my first time ever transferring a project from one programming language to another. This process was a great learning experience, helping me to learn some of the strengths and weaknesses of the different languages used in the project. For example, it was much easier to connect to and communicate with the database, as well as build the data table in Python. However, Java provides better scalability and reusability, and allows for easily developing both a client-facing web application and administrative web application. One challenge I faced was trying to recreate the functionality of the data table in Java. The Python version used a module that made it very easy to provide filtering and sorting options for the data table. This was more difficult to accomplish in Java and took more time to do than when working with Python. Overall, this was a good experience for me and will provide a great artifact for my ePortfolio.