

## **Professional Self-Assessment**

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CS-499 12001: Computer Science Capstone

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I began the computer science program at SNHU in September of 2024 with a strong interest in both technology and Project management. Throughout the program, I have strengthened my ability to design and evaluate computing solutions while also learning how to communicate technical concepts to diverse audiences. For example, in CS-330: Computational Graphics and Visualization, I recreated a picture that I had taken in a cafe in Vietnam using OpenGL in Visual Studio. This project required spatial reasoning, problem solving, precision, patience, and detailed technical documentation. In CS-210: Programming languages, I wrote detailed code documentation that focuses on clarity and maintainability. These experiences have helped to shape my professional strengths around organization, structure, thoughtful system design, and clear technical communication.

Collaboration and stakeholder communication have also been major components that have helped me to grow my project management skills. In QSO-355: Resource Estimate and Schedule, I developed a project management plan that required analyzing constraints, estimating resources, and communicating trade-offs in a way that supported organizational decision making. This course helped me to strengthen not only my organizational skills, but also to communicate project considerations in a way that stakeholders with no technical or management background could understand. In CS-340: Client/Server Development, I designed a MongoDB-backed application that required interpreting user requirements into database architecture and interface design. These experiences have strengthened my ability to connect technical implementation with business objectives and reinforced my long-term goal of working in technology project management.

From a technical standpoint, this program helped me to strengthen my understanding of data structures, algorithmic efficiency, database integrity, and secure software practices. In my

capstone enhancements, I have applied data structures and algorithms to improve both the complexity and performance of the application, and I implemented secure database practices such as encryption and transaction management. Earlier coursework, especially CS-305: Software Security, reinforced this security mindset by requiring me to implement certificate generation and evaluate secure communication standards. I think that one of the most valuable lessons I have learned throughout my coursework is learning how to manage trade-offs such as balancing usability, performance, scalability, and security.

Developing this ePortfolio has allowed me to look back on my time in the SNHU computer science program and reflect on how all of the skills I have learned fit together. My artifacts for this capstone demonstrate software engineering discipline, algorithmic thinking, database design, and security awareness. More importantly, though, they show my ability to approach a computing problem strategically and communicate solutions effectively. This portfolio shows not only what I have designed and built, but also how I think and tackle projects. I approach my projects as a structured problem solver, a security conscious developer, and with the mindset of a technology leader who is ready to make meaningful contributions to the industry.