**Professional Self-Assessment**

Hello! My name is Branden Boehnke, and welcome to my ePortfolio. I started my Computer Science journey at SNHU in 2023 and am eager to transition into the field. Completing coursework throughout my Computer Science program and creating this ePortfolio have been a crucial part in developing my skills, showcasing my knowledge, and setting me up to achieve my professional goals.

Throughout this program, I have gained extensive knowledge and experience collaborating with team members. In my Software Development Life Cycle course, I completed coursework as part of an agile team, taking on the role of a Scrum Master. This experience improved my ability to coordinate with team members. This course role also gave me experience interacting with stakeholders, handling stakeholder needs, and adjusting project timelines when needed.

My coursework has strengthened my expertise in data structures and algorithms by implementing structures like binary trees, stacks, graphs, and queues. My Advising Assistance Program incorporated a graph for prerequisite checking as well as a topological sort algorithm for efficient course schedules. Implementing and analyzing these structures has helped demonstrate and improve my ability to solve real-world problems with algorithmic measures.

My experience in software engineering and databases from the program has aided in the cohesive integration of components for well-structured applications. I’ve worked with databases in MySQL, MongoDB, SQLite, and Firebase that support CRUD structures and ensure proper data integrity and scalability. A prime example of this is my Inventory App, which includes the use of Firebase, secure user authentication, robust data analytics, and efficient inventory management capabilities.

Regardless of the robustness of the project, security is always a central point in my development. When handling a RESTful API vulnerability assessment, I ensured there were measures for secure password storage, input sanitation, and role-based access control. This effort ensured the importance of proper security measures when designing and developing any application.

The following artifacts included in my portfolio were chosen to highlight different aspects of my acquired skills and knowledge. Each one of the artifacts showcase a portion of what I learned from the program. Together as a portfolio, they demonstrate my skills and abilities to develop efficient and secure projects, properly handle complex issues with computational efforts, collaborate with team members and stakeholders, and use software engineering practices to solve real world problems. Artifact 1, the 3D Model Scene, was enhanced with heightened lighting as well as improved textures and shaders. Functional enhancements such as camera zoom, object focused perspectives, and axis focused perspectives were implemented as well. Artifact 2, the Advisory Assistance Program, was enhanced to improve the project’s capabilities and ease of use. Enhancements such as a scheduling system, course recommendations, topological sorting and course prerequisite checks were added to create a fresh and efficient design. Artifact 3, the Inventory App, was enhanced by transferring databases from SQLite to Firebase cloud storage to promote multi-device usage. Other enhancements are security measures like role-based access, and input validations as well as inventory data analytics.

As I am wrapping up this program journey at SNHU, I am grateful for the knowledge and skills I have acquired while being here, and I look forward to the next chapter in my Computer Science career.