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Professional Self Assessment

I started at SNHU in March of 2023 with the goal to complete my degree in computer science. I have worked in the computer science field since 2017 after completing a coding bootcamp and wanted to elevate my development skills and obtain more comprehensive experience in a variety of coding languages and practices. I mostly develop using the MERN/MEAN stack (Mongo, Express, React/Angular, Node) and this degree program has helped me expand my knowledge in languages such as Python, Java, C++, Android mobile development, and OpenGL. I know that after completing this degree I will be more marketable to potential employers to obtain more senior level software engineering positions. This program included courses like CS310 Collaboration and Team Projects that gave me valuable time working on group development projects and contributing to shared Bitbucket libraries and practicing Git branching and version control. In CS320 - Software Testing, Automation, and Quality Assurance, I was able to build and utilize custom unit tests and explain why they are relevant to modern computer science practices. I believe that courses like CS250 - Software Development Lifecycle were the most beneficial to help myself develop as a more job-ready developer. I was able to take the role of different members of an agile scrum development team, and learn how to write valuable user stories, test cases, and sprint reviews. This developed my ability to employ strategies for building collaborative environments that enable diverse audiences to support organizational decision making in the field of computer science. I have stepped into more project management roles in my career, and it is where I want to focus my search for my next job, and this course allowed me to practice these skills in real world applicable situations. Throughout my time at SNHU, I have enhanced my ability to write professional-grade, well commented and documented code that other developers can read and understand my thought process and intentions, and this shows that I can design, develop, and deliver professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts. I also have grown my skills in time management, writing code documentation, and large development planning, because companies don't just expect their programmers to be able to build functional code, but be able to work in fast paced team environments while meeting ever changing deadlines and project scope.

When deciding which artifacts to include in my ePortfolio, I wanted to show my ability to work on a variety of projects that are different to work I could show to a potential employer from my current development job. My first artifact for "Software Design and Engineering" is a weight tracking app built for Android devices from CS - 360 Mobile Architecture and Programming. This artifact category was meant to improve a piece of software and explain its complexity, and I found myself wanting to return to this project that on my first submission was a more basic mobile application that allowed users to track daily weight changes saved to a user profile. This was my first mobile application, and during the initial build I planned to add new functionality to increase marketability and mimic other health tracking mobile applications. This artifact demonstrated my ability to use well-founded and innovative techniques, skills, and tools in computing practices to implement computer solutions that deliver value and accomplish industry-specific goals. For my "Algorithms and data structure" artifact, I chose my final project from CS - 300 "Data Structure and Algorithms: Analysis and Design", a program that sorted college course lists and allowed users to add courses then view the sorted list. I added additional complexity to the data structure with the ability to save a schedule and improved the efficiency of the algorithm logic. This displayed my ability to Design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution, while managing the trade-offs involved in design choices. Finally for the databases category, I chose my final project CS - 340 "Advanced Programming Concepts". This application combined a dashboard built in Python through Jupyter Notebook that displayed information from an animal rescue that allowed users to see data on individual pets with corresponding map location data and statistics. This was connected to a MongoDB database that was manipulated through CRUD (Create, Read, Update, Delete) routes, and I enhanced it by adding the ability to add a picture to a pet's record and have that save to their database record. This demonstrated my ability to develop a security mindset that anticipates adversarial exploits in software architecture and designs to expose potential vulnerabilities, mitigate design flaws, and ensure privacy and enhanced security of data and resources. This group of chose artifacts represents a cohesive body of work from my time at SNHU and demonstrate my ability to meet all the course outcomes.

1. Employ strategies for building collaborative environments that enable diverse audiences to support organizational decision making in the field of computer science
2. Design, develop, and deliver professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts
3. Design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution, while managing the trade-offs involved in design choices
4. Demonstrate 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
5. Develop a security mindset that anticipates adversarial exploits in software architecture and designs to expose potential vulnerabilities, mitigate design flaws, and ensure privacy and enhanced security of data and resources