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Self-Assessment

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Completing my coursework in the computer science program and developing my ePortfolio has given me the opportunity to showcase my strengths, refine my professional goals, and prepare myself for success in the field. Over time, I have gained both the technical expertise and professional values needed to become a more employable computer scientist. This process has allowed me to demonstrate not only my coding skills, but also my ability to work effectively in teams, communicate clearly with stakeholders, and design secure, efficient, and maintainable systems.

One of the most important lessons I learned throughout the program is the value of approaching projects with a collaborative mindset, even when working independently. Many assignments required me to structure my code and documentation as if I were part of a larger development team, which helped me practice writing clean, maintainable, and well-documented solutions. Through peer feedback from instructors and structured review processes, I learned how to refine my work based on critique and how to present my reasoning clearly. Additionally, my practice in preparing presentations, project reports, and technical documentation strengthened my ability to communicate complex ideas in a way that would be accessible to both technical and non-technical audiences. This skill is essential when ensuring that project requirements and client or user needs are met.From a technical perspective, my coursework strengthened my knowledge of data structures and algorithms, which I applied not only in algorithm-focused classes but also in problem-solving scenarios across multiple domains. I practiced designing efficient algorithms, analyzing time and space complexity, and applying the right data structures to improve program performance. These skills complemented my work in **software engineering and databases**, where I applied object-oriented programming, design principles, and database integration to create scalable and reliable applications. I also became more proficient in security practices, incorporating input validation, secure coding standards, and defense against vulnerabilities like SQL injection—skills that are vital to modern software development.

The ePortfolio serves as a comprehensive demonstration of these abilities. My three selected artifacts—SceneManager.cpp for software engineering and design, AnimalShelter.py for database management, and my DAD Final Project for algorithms and data structures—fit together to showcase a wide range of talents. Collectively, they demonstrate my ability to design and implement robust systems, optimize performance with data structures and algorithms, and ensure secure interactions with databases. Together, these artifacts highlight the integration of theory and practice and reflect the professional growth I have achieved throughout the program.

Overall, the capstone experience and ePortfolio have allowed me to bring together the skills I developed across the curriculum into a cohesive professional identity. I now have the tools, confidence, and practical experience to enter the workforce as a capable and adaptable computer scientist.