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## Professional Self-Assessment

Completing the Computer Science program and developing my capstone ePortfolio has helped me clearly define my strengths, sharpen my professional goals, and demonstrate my readiness to contribute to the computer science field. Throughout the program, I built practical skills in software design, data structures and algorithms, database development, and secure computing practices. The ePortfolio process required me to evaluate my work against professional standards, improve code quality, and communicate technical decisions in a way that reflects industry expectations.

My professional background in financial services strengthened my interest in data-driven systems and process efficiency. Entering the program, my goal was to strengthen my technical foundation so I could grow into more advanced technical roles. As I progressed, my focus became more specific: I want to work in development or technology roles that support data workflows, automation, reporting, and system efficiency. Building the ePortfolio reinforced how my coursework connects to real workplace needs such as reliable data handling, maintainable software, and clear communication with stakeholders.

Collaboration has been a consistent theme across my coursework. Even when assignments were completed individually, I learned to work in a collaborative environment through peer discussions, code reviews, and iterative feedback. I practiced explaining design choices, responding to critique, and improving my work based on instructor guidance. These experiences helped me develop professional habits such as

documenting assumptions, tracking revisions, and communicating progress clearly skills that translate directly into real project teamwork.

Communicating with stakeholders is an essential part of building usable software, and the program strengthened my ability to translate technical work into understandable outcomes. Across my assignments, I produced documentation that explains system behavior, constraints, design decisions, and testing results. This improved my ability to describe what a system does, why it was built a certain way, and how it meets requirements whether the audience is technical or non-technical. This is especially important for the types of roles I am pursuing, where developers often collaborate with business users, analysts, and decision makers.

My understanding of data structures and algorithms expanded significantly through the program, particularly through my CS-300 Course Advising System. That work strengthened my ability to analyze time and space complexity, select appropriate data structures, and implement efficient searching and sorting behavior. The enhancement process reinforced that algorithmic design is not only about correctness, but also about performance, maintainability, and clear logic. I learned to justify design decisions with evidence, such as complexity analysis and predictable runtime behavior.

Software engineering practices became central to how I approached every project. I improved my ability to organize code into logical modules, follow consistent naming, and style conventions, and write code that is readable and testable. Through my CS-340 Project One work, I strengthened validation flow, improved modular structure, and emphasized clarity in how data is accepted, rejected, and logged. These are professional

habits that help teams maintain software over time and reduce defects during deployment.

Database skills are a major strength reflected throughout my ePortfolio. Using MongoDB in CS-340 helped me understand how application behavior depends on data integrity, query efficiency, and reliable configuration. Through CS-340 Project Two, I demonstrated database-driven application development through a dashboard connected to MongoDB, including indexing decisions, schema validation, and role-based access considerations. This work is strongly aligned with my interest in data-focused systems, where the database is not just storage, but the foundation for meaningful application behavior and reporting.

Security was treated as a necessary part of professional computing rather than an optional feature. Throughout the program and my enhancements, I strengthened my awareness of secure configurations, access control, and validation practices. In my database work, I incorporated security reasoning through controlled access, safe data handling, and validation that prevents invalid or unexpected data from being accepted. While I continue to grow my security mindset, my ePortfolio reflects an understanding that secure development practices must be integrated into software engineering and database design from the beginning.

Together, my artifacts form a cohesive portfolio that demonstrates my range as a computer science professional. The CS-340 Project One enhancement shows my ability to implement professional software practices such as validation, modularity, and maintainability. The CS-300 artifact demonstrates algorithmic thinking, data structure selection, and performance-aware development. The CS-340 Project Two dashboard

demonstrates my ability to build database-driven systems and apply principles of data integrity, indexing, and secure configuration. Combined, these artifacts show that I can design, build, test, and improve software that is grounded in real data and professional standards.

Overall, the capstone and ePortfolio development process helped me confirm my professional direction and present evidence of my abilities. My portfolio reflects a data-focused approach to software development, strengthened by algorithmic reasoning, database expertise, and disciplined engineering practices. I am prepared to enter the field as a capable and motivated computer science graduate with demonstrated skills in building dependable, maintainable, and data-driven systems.