**Professional Self-Assessment**

Zane Milo Deso

Southern New Hampshire University

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Completing the Computer Science program at Southern New Hampshire University has been a slow, steady transformation in how I approach problems, design solutions, and think about the craft of software development. When I started, my work leaned heavily on raw determination and quick problem-solving instincts. Over time, I have learned how to pair that energy with structure, foresight, and a deeper awareness of how code fits into a bigger picture.

This capstone, built around my recipe recommendation web application, pulled together every core skill I have picked up along the way. It is a project that started as a working prototype and evolved into something with real architecture, scalability, and professional polish. The enhancements I implemented in software design and engineering, algorithms and data structures, and databases were deliberate decisions to make the app maintainable, adaptable, and useful.

**Collaboration and Communication**

While this program was largely self-driven, collaboration still played a huge role in shaping my work. Through peer discussions, code reviews, and instructor feedback, I learned how to explain my decisions clearly and adapt to new perspectives. My code review video for the capstone reflects this. I walk through the code as if speaking to a peer developer or stakeholder, keeping it accessible but technically grounded. I have found that explaining code out loud forces you to be honest about whether it is as clean and logical as you think it is.

Technical Growth

On the algorithm side, I have moved from writing code that works to designing solutions that make sense mathematically and structurally. The binary vector dot product matching system is a good example. It is simple in concept but efficient, predictable, and extendable. In the database category, moving from static JSON files to a fully integrated MongoDB backend taught me how important data consistency and schema design are to the function of an application. On the software engineering side, cleaning up the project’s architecture, modularizing the backend, and documenting usage in a professional README were all about making the project understandable for someone new coming in. That skill translates directly to working in real development teams.

**Security Mindset**

Even though my capstone was not security-focused by nature, I have built up a habit of thinking about how code could break or be exploited. From validating user input to keeping database operations efficient and safe, I have learned that security is an aspect one should build into the design from the start.

**How It All Fits Together**

The three enhancements in my ePortfolio are connected steps toward creating a full-stack application that could be deployed and maintained in the real world. The software design work made the project cleaner and more scalable. The algorithm enhancement gave it a faster way to deliver relevant results. The database integration moved it from being a local demo to something ready for actual deployment.

Looking back, the biggest shift for me has been moving from a getting-it-to-work mindset to getting it to work well, for the long term, and for other people too. I plan to carry that forward into my career, building software that is practical, robust, and has a clear purpose, while continuing to refine my skills in collaboration, communication, algorithmic problem-solving, software engineering, database integration, and security awareness.