Foster Hare

CS-499

Professor Martinez

12/10/2025

Professional Self-Assessment

Throughout the Computer Science program and the CS-499 Capstone, I have gained the technical foundation and professional skills needed to succeed as a software engineer. This experience allowed me to work with real projects that required thoughtful design, problem solving, and reliable implementation. The artifacts in my ePortfolio represent the areas where I have grown the most: software design, algorithms and data handling, mobile development, embedded systems, and full-stack application development. Together, they show the range of my abilities and the way I approach building and improving software.

One of my strengths is the ability to design and refine software that is clear, organized, and maintainable. Throughout the program I learned how to break complex problems into smaller pieces, plan effective architectures, and write code that is structured for long-term use. Enhancing my EventBuddy mobile application is one example of this growth. I revisited an older project and made improvements to the interface, the workflow between screens, and the overall clarity of the codebase. This experience strengthened my understanding of modular design, user experience, and the importance of writing code that is easy to modify and understand.

I also developed strong skills in algorithms and data structures by improving how applications handle information. Whether I was managing event data in a mobile app or building a state machine for embedded hardware, I learned how to create logic that is efficient, reliable,

and able to support more complex features. These projects helped me understand how to structure data, optimize processes, and debug systems in a way that improves performance and clarity.

My work with databases is another important part of my preparation. I gained hands-on experience with SQLite and MongoDB and learned how to create schemas, write effective queries, validate user input, and connect front-end interfaces to persistent storage. These skills are essential for real applications, and the enhancements I made during the capstone show my ability to build data-driven features that are accurate, secure, and efficient.

Beyond the technical work, the capstone helped me grow in communication and professional presentation. Documenting enhancements, planning improvements, reviewing code, and explaining design decisions all strengthened my ability to communicate clearly. This is an important skill for collaborating on development teams and for presenting work to employers or stakeholders.

Overall, the Computer Science program has prepared me to enter the field with confidence. I have experience with full-stack development, mobile applications, embedded systems, secure coding concepts, testing and debugging, and structured software design. My ePortfolio highlights both the projects I created and the growth that happened while building and improving them. I am ready to bring these skills into a professional environment and continue developing as a software engineer.