Throughout my time in the Computer Science program at Southern New Hampshire University, and while developing this ePortfolio, I’ve grown significantly both technically and professionally. Between the coursework and my internship at Compotech in Orono, Maine, I’ve been able to build the skills I need to move toward a career as a full stack software engineer.

One area of growth has been collaborating in a professional software development environment. At Compotech, I’ve worked on a team of twelve engineers with diverse backgrounds. Through planning meetings, code reviews, and peer programming, I’ve learned how to contribute effectively in a collaborative setting. I’ve also developed the ability to give and receive feedback productively, skills that directly support the course outcome of building collaborative environments that support organizational decision making

I’ve also gotten better at communicating with clients and stakeholders, especially those who aren’t technical. I’ve had to translate client requirements into actionable development tasks and explain technical constraints in ways clients can understand. That means finding the balance between what’s technically possible and what’s going to make sense for the user, which is a concept I learned in my coursework and have applied to my internship. It’s been a great experience for me to understand how software development works outside of just writing code. This also aligns with the course’s outcome of designing and delivering professional quality communication.

Security is another area in which I feel I've made significant progress. Early on my coursework, I did not always think about how vulnerable software can be if it is not written with security in mind. As I progressed through my coursework, security was a concept that came up often, in multiple classes, proving its importance to me. In my Artifact 3, I included multiple security measures to protect user data. I used prepared SQL statements for all database operations to prevent SQL injection attacks, and added input validation on all input fields to confirm only valid input could be submitted. I also incorporated exception handling using try catch blocks to handle database connection failures or unexpected runtime errors. This aligns with the course outcome 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.

From a technical standpoint, I’ve built a strong foundation in software engineering, data structures, and algorithms. Artifact 1 focuses on transitioning the original terminal-based appointment manager into a graphical user interface using Java Swing, showcasing my front-end development skills and attention to user experience. In Artifact 2, I enhanced the program by adding a search algorithm that allows users to search by name or date, demonstrating my ability to evaluate algorithmic solutions, integrate them into user interfaces, and manage design tradeoffs. Finally, Artifact 3 expanded the project further by integrating an SQLite database and creating a modular architecture that separates the database logic from the interface, highlighting my back-end development skills and understanding of secure, maintainable software design.

This ePortfolio showcases three enhancements to a single project, a Java based appointment manager that I originally created in CS 320 Software Test Automation and Quality Assurance. These artifacts show how I've grown from building a simple command line tool to a full, secure desktop application with a graphical user interface and integrated database. Together these artifacts show my ability to design, build, and improve real world applications using full stack principles. They demonstrate how I have applied the knowledge I've gained throughout this Computer Science course to build meaningful and professional software. As I prepare to graduate, I feel ready and excited to use what I have learned to build solutions to real world problems that are functional, secure, and impactful.