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Module 7   
CS 499

Professional Self Assessment

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08/24/2025

My time in the Computer Science program at Southern New Hampshire University has been both challenging and rewarding. When I first started, I knew I wanted to understand how technology works beneath the surface, but I did not realize how much I would grow as both a learner and a problem solver. Building my ePortfolio has given me a chance to step back and see how far I have come, not just through assignments, but in how I think, create, and approach real-world problems. This portfolio tells the story of my journey and shows the skills I now bring into the computer science field.

Throughout the program, I built projects that pushed me to learn new languages, apply complex algorithms, and think about the people who would use the software I created. One of the first major projects I am including is the ABCU Course Advising System. Originally, I built it in C++ using a hash table to store courses and prerequisites. It was functional but limited to a console-based menu. When I enhanced it, I decided to rebuild the system in Python and give it a graphical interface using Tkinter. This project taught me how to take something basic and make it more approachable and user-friendly. It also showed me how skills translate across languages and how important it is to design with the user in mind.

Another project that shaped my growth was the Binary Search Tree assignment. At first, it was a straightforward C++ implementation that allowed me to practice recursion, searching, and traversals. But it also revealed the weaknesses of a regular BST when the data isn’t balanced. To improve it, I converted it into an AVL Tree, which can keep itself balanced by tracking node heights and using rotations. That process made me dig deeper into algorithm design and really think about performance. It gave me a strong appreciation for how choosing the right data structure can completely change how efficient a program is.

The third project I am including is my Animal Shelter Dashboard, which originally used Python and MongoDB with Jupyter Notebook for data visualization. It worked well as a learning project, but it didn’t feel like something that could be used outside of class. So, I took it further and turned it into a full-stack web application using the MERN stack. By building out an Express backend, React frontend, and tying everything to MongoDB, I created a dashboard that felt much more modern and interactive. This was one of my favorite enhancements because it pushed me into full-stack development and gave me experience with the kind of tools companies use every day.

Along the way, I also learned how important collaboration and communication are in this field. From group projects to technical discussions, I had to learn how to explain my thinking clearly, whether I was talking to classmates, instructors, or people who might not be technical at all. I realized that being able to bridge that gap is just as important as writing good code. Security also became a key part of my mindset, from preventing overflow errors in C++ to handling API requests carefully in my web projects. These experiences helped me understand that good software is not just about getting something to work—it’s about making it safe, reliable, and understandable.

Together, my three main projects show the different areas of computer science I have grown in. The advising system highlights my software design skills and focus on usability. The AVL tree shows my ability to think critically about algorithms and performance. The animal shelter dashboard demonstrates my database knowledge and ability to build interactive, scalable applications. When combined, they paint a picture of someone who can work across languages, frameworks, and problem domains, while always looking for ways to improve.

Looking ahead, I see myself pursuing opportunities as a software engineer or DevOps engineer. These roles excite me because they bring together problem solving, collaboration, and building systems that can grow and adapt. Long term, I also want to mentor and teach others, sharing the same kind of encouragement and knowledge that I benefited from during this program.

This self-assessment is both a reflection and a starting point. It shows the growth I’ve achieved and the values I will carry with me into my career: writing code that is efficient and secure, designing with the user in mind, and always staying curious enough to keep learning. I feel prepared to enter the computer science field not only with a strong technical foundation but also with the perspective and drive to make a meaningful impact.