Throughout my experience in the Computer Science program at Southern New Hampshire University, I’ve learned a ton about programming, testing, and the ability to interact with real world situations. I believe that completing my coursework (and then enhancing three key artifacts in this e-Portfolio) showcases my problem solving abilities, my ability to thoroughly test programs and find issues/fix them, and my ability to optimize programs. I’ve had several courses which have contributed to me becoming well-rounded in the computer science field, based on key aspects of the field. For example, I’ve engaged in several classes relating to collaborating in a team environment, such as my CS 250: Software Development Lifecycle course, which focused on Agile development and working concisely with a team. I learned key skills about how to work together with others in order to complete projects and solve problems. This expands to the concept of communicating to stakeholders, which I learned a lot about in my DAT 220: Fundamentals of Data Mining course, which focused on accurately analyzing sections of information and explaining my findings/recommendations to a company based off of the information. This happens all of the time within the industry, and it’s really important to know how to make key business recommendations based off of relevant information. In regard to data structures and algorithms, I have a lot of classes under this section, including CS 260: Data Structures and Algorithms, and IT 365: Operating Environments. In these courses, I learned a lot about optimization for programs, while still maintaining secure code for each program I worked on. In today’s world of increasing optimization and speed, having this under my belt is necessary. Next, for software engineering, the vast majority of my classes have focused on code development, but my favorite course was CS 320: Software Testing, Automation, and Quality Assurance. This course taught me so much about the importance of constantly and consistently testing code, and taught me about the importance of Unit Tests, which can be a huge help, especially with complicated programs. For databases, I learned a lot about mySQL and MongoDB through my DAD 220: Introduction to SQL and CS 340: Advanced Programming Concepts courses. I’m most comfortable working with databases, and was able to pick up on the concepts of these courses very quickly. Lastly, for security, all of my courses related to developing secure code, but I did learn a lot specifically through my CS 405: Secure Coding class, which was integral in teaching me about how to find different types of bugs and errors, as well as how to fix them. It also taught me a lot about potential security risks and how to mitigate them. With all of that said, these combined skills make me prepared for the Computer Science field because they’ve made me extremely well-rounded, and in conjunction with my drive and motivation, along with my problem solving abilities, I feel extremely confident that I’ll be able to make a positive impact wherever I go within the field.

Before we get started with the contents of the e-Portfolio itself, I want to first summarize what each artifact will do, and how they fit together to show off my skills. My software design enhancement refers to a medical program, but the bigger point of it is to show off my skills in creating Unit Tests in order to verify that each function works as intended. In my enhancement, I greatly optimized the program and added more Unit Tests. For my algorithms enhancement, I fixed/added a few different functions within the Linked List program, which takes data from a CSV folder and loads it, as well as letting the user search through it, add content to it, etc. Lastly, my databases enhancement is essentially a showcase of my ability to utilize SQL commands, ranging from simple to relatively complicated. The reason I chose these three specific artifacts was to demonstrate the full range of my computer science abilities, and to show that I’m well rounded in the field. Without further ado, let’s begin with the code review.