I began work on my Bachelor of Science in computer science at SNHU in October 2021. I received my associate degree in January of 2023 and finished coursework for my bachelor’s degree in June of 2024.

Throughout my studies, I have developed an invaluable set of skills, principles, and attitudes that will let me fulfill my professional aspirations with confidence and purpose. My knowledge, creativity, and drive make me a great fit for virtually any development or analytical role. I can work on my own, efficiently managing time, deadlines and results, or as part of a team in both contributing and leadership roles. In addition to understanding how to best take advantage of the benefits provided by computers, I also know the importance of a strong work ethic, professional discipline, effective communication, and the ability to efficiently manage projects large and small.

## Collaborating In A Team Environment

Thanks to courses such as CS-250, Software Development Lifecycle, I am familiar with both waterfall and agile project management methodologies and understand how to leverage both approaches to achieve the best results for a given project. I am also aware that for any team project, clear and open communication is a must. The team functions better than the sum of its parts when individuals work to keep each other updated and “in the loop” as the development process plays out.

## Communication With Stakeholders

Several courses including project management, data analysis, and statistics helped me develop the skills necessary to communicate complicated ideas to different types of audiences. While fellow team members might want detailed explanations of the processes you go through, managers in need of information to make decisions won’t be as interested in the inner workings of a statistical analysis as they will be in the analysis results. I understand that I will often need to change my communication methods depending on who I am speaking to and what they want (and I have the skills to do so effectively).

## Data Structures And Algorithms

Courses such as CS-300, Data Structure Analysis and Design have given me a strong foundation in data structures and algorithms. As part of the projects completed for the course, I conducted a detailed analysis of various data structures including vector storage, hash tables, and binary search trees. I was also tasked with creating search and sort algorithms, and finally, comparing the performance of various combinations to determine the best solution for a hypothetical use case.

## Software Engineering And Databases

Data analysis is an area of computer science that I am especially interested in. I have taken several extra elective courses dealing with statistics, data analytics methods, and machine learning. Of course, a large portion of my classes also involved programming in one form or another. I prefer writing code in Python and Java, but I am proficient in other languages including C++ and R as well.

I am also comfortable with several different development environments. I have worked on projects for both Windows and Linux with command line and graphical interfaces, using IDEs such as Eclipse, VSCode, Visual Studio, Codeblocks, and Jupyter Notebooks.

Various data courses have fed my knowledge of both SQL and NoSQL databases. I have put together and worked with implementations of MongoDB, MySQL, and PostgreSQL. I understand the pros and cons of both types of systems and how to get the most out of each.

Various course projects have covered everything from simple database and table creation to a full stack single-page web application using the MEAN stack (MongoDB, Express.js, Angular.js, and Node.js). I thoroughly enjoy the process of seeing results materialize from the code I have written.

In addition to developing software for different users and purposes, I also understand the importance of thorough testing. I am quite capable of writing unit tests that help ensure all my code is not just functional but produces the intended results consistently and reliably.

## Security

Security is, of course, a core principle in any type of computer science role. From software development to data storage and analysis, it is the responsibility of everyone in the field to do their best to maintain the security of systems and sensitive information. During my studies at SNHU I have developed an ingrained security-conscious mindset. No matter if I am working on code or searching for something in a database, I am always careful to make sure that I am not creating (and indeed preventing) security holes. I fully believe in the concept that no user should have access to anything more than what they absolutely need to carry out their job. Access levels should be consistently monitored and managed and entry points should be routinely tested for weaknesses or breaches.