Professional Self-Assessment:

During the progression of the Bachelor of Computer Science with Concentration in Software Engineering at Southern New Hampshire University has provided abilities, through processes, and allowed skills to be exhibited through showcasing in an ePortfolio. The strengths in unfamiliar areas and the developed personal goals have enabled the ability to pursue new and emerging career paths. With that, some skills acquired but not limited are Secure Coding, Mobile Architect & Programming, Discrete Mathematics, and Client/Server Development which assist in shaping current or future goals and enable employment opportunities. Further, the course work has assisted in or did develop skill in team collaboration. This was seen by the utilization of an eGit environment while developing a platform with others and utilizing SCRUM environments to coordinate with teammates in priorities or communicating to clients/stakeholders. Also, the capacity within the realm of software engineering and databases could be seen when taking binary code, converting the binary code to an assembly language to see how the program was interacting with memory allocations, and then producing human legible code based off the assembly language. Further, the utilization of secure coding, and understanding how easily items like an copy & paste error or leaving unsure variables can cause vulnerabilities that can or will enable program or hardware exploits.

The artifacts utilized throughout this portfolio range from secure coding, Software Design and Engineering, Algorithms and Data Structure, and Databases. Within the Software Design and Engineering artifact, it is shown on how to reverse engineer an application, find memory allocations, and produce legible code from an executable. Also, showing the ability to show flaws or issues within the code that could become exploitable in memory allocations. In addition, we have Algorithms and Data Structures artifact, which shows the implementation of an authentication server, and the ability to securely transmit information to allow access between input, process, and return of information. Furthering, Database artifact showed the capabilities to function throughout a database, create code to interface within massive data-structures that would sort, add, modify, and query information within the database. Combined these three artifacts show an ability to be versatile within different areas and be able to combine the realms to generate a holistic insight into software development and engineering.