

Personal Self-Assessment

When reflecting on my learning throughout the Capstone 499 course, I have learned how necessary it is to create a professional ePortfolio that displays my skills on [GitHub](#). I am aware that building a portfolio is very important as I am getting ready to apply for jobs in the Computer Science field. I have gained many skills throughout the program that has allow me to build several presentable projects. I hope that whoever can view my project, can fully see the work that I have put into this project. For this portfolio, I chose an artifact that was centered on a Checkers game code built using Python language. This artifact is from a class I took two terms ago which was IT 450 Artificial Intelligence.

Within the portfolio, there are three different type of enhancements that explicitly present my work. For the Software Engineering Design part, I rearranged the buttons around to facilitate the use of certain buttons such as 'start', 'pause', and 'save'. These were hard to view once the game started. These buttons needed to be more visible so the game would be easier to play in case the user suddenly had to pause or save the game.

For the Algorithms and Data Structures, I implemented a Heap Table and a Search Algorithm which was a good fit since the code was built using many Binary trees. I have taken a data structures class before except I only learned the math part of it and not how to put it together in a code. This was a challenge at first but after a few hours of practicing, I learned how to integrate a data structure code into the artifact. It makes sense to include an algorithm in order to easily locate a specific data faster than a regular array.

Lastly, I created a Database from ten different games played that keeps track of all the wins and losses. I used SQL programming language for this part. I coded a CRUD query that stored the game scores. In this section, I had to learn on how to put everything together along with the main code. I do not think it was as complicated as I first believed it would be especially once I got the SQL code to compile with no errors.

A well-developed application is still incomplete without going through the proper security measures. A good habit would be to search and fix any security issues right away. For example, leaving a coding error unchanged could welcome any unverified inputs. This mistake can leave an app susceptible to SQL injection attacks. Another security process is to perform continuous deployment and integration during a software cycle therefore preventing untested coding from being merged into the main branch. One more thing, it is important to have a colleague perform a code review that can detect unnoticeable bugs lurking in the code. Following these secure procedures can block future vulnerabilities.

Overall, I hope that my work fully demonstrates my coding skills that I have gained throughout the CS program. In addition to this, I got to experience a team-work environment as well as completing a task within a time limit. I truly feel that my time at school has strongly prepared me for my future career as a Software Engineer which is a job I have always dreamed of.