Marcus Doucette

2025-10-13

CS 499

Professional Self-assessment

1. Discuss how completing your coursework throughout the program and developing the ePortfolio has helped you **showcase your strengths**, shape your professional goals and values, and prepare to enter or become more employable in the computer science field.
   1. Use specific examples from your program and include examples outside of the artifacts included in your ePortfolio.

I believe that the course has helped me identify more about what I like about programming, why, and which fields would best support those values. While I think it’s very useful to be able to do anything, I’m willing to put in a bit more work to come out the other end with something that feels more robust so working with lower level languages like c++, or dealing with complex data like in databases is very rewarding. I also like working on embedded systems, mobile, and graphics programming since each of those disciplines have many single focus concerns. I am glad to have android development and graphics programming as part of my skillset, and while web dev projects aren’t my cup of tea, learning how to use databases more relyably for other applications is always a plus, and being able to do well at things you don’t enjoy is something that I think is worth showing off too.

* 1. Address the following topics: **collaborating in a team environment, communicating with stakeholders, data structures and algorithms, software engineering and database, and security.**This section should function as an overall introduction to your skills, not a discussion of the artifacts.

I think that there is great value in all 5 of the topics outlined in this course, in part because they are skills that can always be improved upon. Being able to communicate and collaborate with team members and stakeholders is a skill I’m happy to have been developing not just in school but in my teaching job where being able to break down big problems into understandable chunks to help keep everyone on the same page has been invaluable to my success. Similarly, datastructures, algorithms, software architecture, databases, and security are all skills that can help with delivering on any one of those manageable chunks of a project.

1. Summarize and introduce how your artifacts fit together and inform the portfolio as a whole.
   1. This summary will help demonstrate the full range of your computer science talents and abilities.

I like to think that all 3 of my artifacts together show a good breadth of ability across the domain of software engineering. Mobile devices, desktop computers, databases, and websites make up quite a large percentage of the domains that people think of when they imagine computers. Not only knowing how to use each one of these tools but also how to build solutions to new problems through each is something I hope to use as a foundation for the rest of my career. While embedded systems is another domain I’m passionate about but was unable to show off in this portfolio, I plan to find a good project to work on when I graduate that can help further demonstrate my breadth of computing ability.

* 1. This section should introduce your audience to the technical artifacts that follow the professional **self-assessment.**

The first of my artifacts is a mobile app developed with android studio. it lets users insert items that the application will then store and help manage. I think it shows off many of the important skills involved in mobile application development from interacting with operating system features like push notifications or storage, to being able to perform important data processing steps like filtering by name or authentication.

The second artifact is a scene made with 3D primitives in OpenGL. Not only does this demonstrate my ability to work within complex frameworks, but I think it also stands as a good example of being able to communicate the value of a project with just a picture. I also added a feature to allow users to input their own OBJ files in order to allow customization and show my ability to engineer some flexibility even into something as seemingly rigid as the graphics pipeline.

The third artifact is a web app that combines multiple client programs and a database backed server application. I think that this artifact demonstrates my abilities to work with security concerns, databases, and distributed systems since unlike the other two projects this one is built from multiple executables depending on one another to function optimally.