Adam Jarvis 09/12/2022

Individual Assessment

The senior design project, also known as capstone project, is meant to help demonstrate and utilize lessons taught both inside and outside the classroom throughout college. From my own individual academic perspective, I believe this definition to be true. Personally, I view this project as an opportunity to implement and use the skills I’ve learned these past few years at the University of Cincinnati to create something exciting and new. Using my knowledge from my previous courses and my experience from my co-op semesters, I’m looking forward to creating a web-application for my senior design project.

Throughout my college career, I have taken many classes that have given me the skills and knowledge needed to be successful in the field of computer science. In my first year, both ENED 1100 and ENED 1120 helped me understand the fundamentals of being an engineer, including how to think and problem solve like an engineer. In my next year, I had the opportunity to take Data Structures (CS 2028C), which helped me understand how to properly create and implement complex data structures. Programming Languages (CS 3003) taught me the differences and strengths of each programming language paradigm. Database Design and Development (CS 4092) was particularly interesting, since I was able to learn how to effectively design and create a database. While all my previous courses were helpful in making me a better computer scientist, these specific classes will be especially helpful for the senior design project.

Like my previous courses, my job experience from previous co-op semesters will also be very beneficial towards this project. My first co-op position was assistant software developer at Martin & Associates, a computer consultant company. My main priority was actively developing and maintaining an integration service between CRM and ERP systems using primarily C#, SQL, and HTTP. I spent four out of my five co-ops with Martin & Associates, and I spent most of my time working on the integration service. I was able to learn what real-world software development looks like, such as using Gitlab, Jira, Agile/Scrum terms, etc. My next co-op experience was at London Computer Systems (LCS), also as a software developer. At LCS, I was part of the Net Dial Tone (NDT) team that actively built and maintained NDT, a VoIP telephone solution using Asterisk and OpenSIPS. While I learned a lot about VoIP and telephone handling, I also spent a lot of time working on the customer and admin portals for NDT using ASP.NET, Angular, and Web APIs. I really enjoyed working on both the front-end and back-end of NDT, which inspired me to work on a web-application for my senior design project.

As I mentioned above, I really enjoyed working on both the front-end and back-end of programs during my co-op at LCS. Because of this, I knew I wanted to work on something similar for my senior design project. Thus, William and I decided to focus on a web-application with a front-end UI and a back-end system. We figured that a project like this would give us the opportunity to both apply our classroom knowledge and co-op experience while learning and forming new skills. While we haven’t settled on a specific type of web-application to create, we have been discussing ideas such as a digital student planner, a digital grocery shopping list centered around students/meals for one, a password generator, or even a simple meme generator.

All in all, we are very excited to work on a web-application for our senior design project using our knowledge and experience from previous classes and co-op positions. We have already begun our preliminary research, including researching which languages to use or technologies to implement. So far we have looked at both ASP.NET and Angular four our front-end and will most likely implement a SQL database. Even though it will take us a while to finish the project, we also plan on eventually gathering user feedback and self-evaluating to see if we can improve our project. However, as of right now, our final goal is a fully functioning web application compatible on both desktop and mobile that includes all the requirements established by the team.