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Senior Design

Individual Capstone Assessment

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Senior Design is an exciting opportunity to create something from the bottom up. This project will allow myself and my group to apply the knowledge and skills that we have acquired throughout our schooling. It is an invaluable experience that will help us to transition to the workforce by giving a glimpse of the full development cycle. It will also be a very valuable addition to our resumes that we can display for future employers. Thinking critically and articulating effectively will be a major factor in our process. The culmination of all our learning being displayed in a capstone is thrilling and will have many benefits.

Throughout my college experience there have been several key computer science courses that have helped shape my skills and understanding. Courses such as CS3003 - Programming Languages gave me a highly abstract overview of many languages and the basic rules and logic that tie them all together. CS 2021 – Python Programming was also very instrumental as I often use python due to my in depth understanding in this class. I was able to learn and practice python’s more complex subjects which helped me to become a more efficient developer overall. Also, CS 2028C – Data Structures gave me a deep understanding of necessary coding frameworks that are commonly used today. These courses laid a solid foundation that I was able to put into practice through my coops.

My coop experiences were instrumental in enriching my skills and provided practical insights into industry practices. During my coop at Nlign Analytics as a Junior Engineer, I worked on a damage tracking tool for aircraft that would allow maintenance workers to interact with a 3d model and its individual parts. I was able to use multiple languages in this coop and kickstarted my development prowess. During my multiple semesters at Siemens PLM, I gained valuable skills in other areas such as QA testing and communication. My team was stationed in Italy which was six hours ahead. This was a challenge that I was able to overcome and refine my communication skills at the same time. I expect to use all these skills learned in guiding the development of our project and ensuring it aligns with our goals.

I am genuinely excited about participating in this senior design project for multiple reasons. Firstly, being able to address an idea and develop it to be a real-world product is exhilarating. Being able to create an application from the ground up, following it in every step, feels like fun and rewarding challenge and is a main reason I am a computer science student. Additionally, the collaboration of this project will be an enriching learning experience through the diverse minds of my group. Each individual will be able to bring different technical skills and insights from their different experiences. This project presents an opportunity to apply my knowledge and personally and professionally grow.

Our current approach is a phased methodology in which research, planning, and agile development occurs. The beginning phase will consist of extensive research on competitors and analysis to gain some insights into how the structure of the product should change. After listing out necessary and extra possible features, prototypes will then be used to nail down what designs we would use. Group meetings with democratic decision making will help us to agree how to move forward in each step of the development process. Rigorous testing will be deployed on created features and feedback will be integral. We aim to deliver a useful and easy to navigate application that will be fully operational and be able to be used at any time. Our success will be determined by usability and user satisfaction. I will also personally seek feedback from our advisor and my teammates to gain insights on my contributions for areas of improvement. If the application meets our set goals and user expectations, I will consider our work as a success.