Grace Owens

September 12, 2022

CS5001

Individual Capstone Assessment

1. One paragraph introduction about what your senior design project is all about from your individual academic perspective

I am hoping to create a platform that serves as a safe space for patients of chronic illnesses, cancer, and more to be able to research and communicate about their condition with doctors and other patients. This project is very personal to me after being diagnosed with acute leukemia in January. I was immediately told by my medical team to stay off the internet, and not google anything, which was extremely hard. After I failed to do that, I realized why. People can post anything they want online without being corroborated, so it was impossible to sort through the junk and know what to believe and what to pass off as someone else’s horror story that’s not relevant at all to me. Throughout treatment, I kept trying to think of something I could use that would help. A place where I could actually research about my condition and get heavily vetted answers as well as communicate with other verified people in my situation would have been incredibly resourceful

1. Two paragraphs on how your collective college experiences will guide the development of your project
2. Curriculum: After five years of taking computer science classes, we’ve all picked up a lot of tools and technologies that will assist us going forward. Although we haven’t had a lot of exposure to application development and design, we have worked with a number of languages and other tools I know we’ll draw on. I feel like our first couple of years were really building up our foundation of programming. We took classes like CS1021C which was pretty much an intro to CS. Data Structures (CS2028C) taught us more about good programming practices and expanded our knowledge on what we could accomplish with programming. In CS2021, we did a deep dive into Python, one of the most popular and versatile programming languages. I wouldn’t be surprised if we end up using Python for a lot of our development so we could be drawing on this class a lot. Another class with a programming language we may be using was EECE3093C, where we used Java to learn about software engineering. Another useful class we may need to look back on was CS4092 where we explored database design using SQL. Our app will need to handle some level of user data which could contain medical information, meaning we would need a very strong database background.
3. Co-op experience: I spent every co-op semester as a cyber software engineer at Northrop Grumman, working on a variety of projects that taught me applicable skills such as web development, application development, embedded systems, and more. The skills I picked up while working on web development will definitely be useful for our project. I learned a lot about application testing, and developing front and backend code. Another semester that taught me some useful skills was when I worked on application development and user interfaces. There were a lot of finer details I learned when it came to making the user interfaces interact with themselves properly and when it came to making the interface aesthetically pleasing. I’m sure when we’ve developed enough code on our project, we will want to implement unit and automated testing, a skill I worked with a lot on co-op.
4. Motivation for the project and preliminary project approach

I am extremely motivated and excited to work on this project because it is a tool I could have personally used when going through cancer treatment. There were so many times I had questions I wanted to ask my doctors but was days away from an appointment so turned to Google. Time after time, I would think I was tech-savvy enough to navigate the Wild West of Google, and it was always a mistake filled with horror stories and jump scares. There were also so many times that I wished I could’ve been connected with someone else who knew what I was going through. When thinking about starting this project, which is the largest I believe any of us have worked on, I think it’s important for us to hammer out as many details as possible before we start. I think we should have a good idea of the languages we want to use, and any tools or frameworks. Then, if any of us are uncomfortable with any of them, we have time to get situated and acquainted with them. Realistically, I don’t think we’ll ever feel fully finished as there are always pieces to tinker on. I’d like to see a functional application with a social feature as well as a way for users to research.