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CS 5001

Dr. Yu Zhao

Individual Capstone Assessment

From my individual academic perspective, my senior design project is all about being something enjoyable to work on while also being a good point on a resume or talking point for a job interview. I wanted to choose a project that I wouldn’t grow to despise by the end of it, while also picking one that wouldn’t be too complex or stressful to finish by the deadline. I’ve also done a project in game design during one of my past co-op semesters when I was in the EEP program, so this senior design project will be somewhat familiar territory. However, that doesn’t mean this project will be easy, I’ll still have to learn many new skills to accomplish what I want to do. This will be my first development experience with AI outside of previous classwork, so I’ll need to learn entirely new tools and libraries. However, because I’m working with a group, I’ll have help from others to guide this project, as well as helping them with parts they need help with, and we’ll all be able to keep each other on track and moving forward.

The majority of my college classes won’t have much of an impact on the project, since they mostly focused on the theory behind their subjects rather than putting them into practice through projects and such. Additionally, none of my past courses relate to game design in any way. The only two courses I could see being somewhat relevant are Software Engineering (EECE 3093) and Principles of AI (CS 4033). My software engineering class was likely one of my more useful classes in terms of learning things I could apply in the workforce and on software projects. There was a heavy focus on using GitHub and version control software, culminating in a final project for the class where we had to make a contribution to an open-source repository. Given that I’ll be working with a group, we’ll all need to be working on different parts of the code at different times, so knowledge of how GitHub and Git version control works will be very useful.

I’ll also be able to apply knowledge I learned during my co-op semesters. I was a front-end software engineer at Kroger Technology & Digital for 4 of my co-op rotations. During these co-ops, I worked with other developers on the same team, so I know how to collaboratively develop software in a group environment. Additionally, since schedules needed to be kept in order to make sure work was completed on time, I can apply my knowledge of Scrum and Agile frameworks to ensure that the project stays on pace and everything gets completed by the deadlines. Since I worked on front-end development, I have decent knowledge of what good design looks like, as well as knowledge of the tools designers use to make mock-ups, which will be useful for testing out design ideas and presenting them to my group. The design tools I learned on co-op will also be useful for organizing ideas in a visually pleasing way, which will make it easier for myself and others in the group to keep notes on the project.

A big motivational factor for this project is that it’s going to be an interesting project to work on. I’m excited to work on a project for a class that I have more freedom in which directions I take it instead of making the same thing as everyone else and being graded by a strict rubric. I’m also excited for this project because it’s different to everything else I’ve worked on in my years at UC, with the exception of my EEP project I did a few years ago. None of my classes have ever had a project that’s meant to be interacted with, much less one meant to be enjoyed by the user like a game. I’m also excited to be working on this project with my friends, instead of by myself or with a group of classmates I don’t know. Working on this project with a couple of friends will allow the three of us to collaborate much better than if we didn’t know each other.

My preliminary approach to designing a solution is to discuss ideas with the other members of my group. It’s much easier for me to solve a problem if I can bounce ideas off of others and get confirmation that my approaches to solving the problem make sense. The expected result of this project is a game that both showcases a novel use of technology and that is enjoyable to play. In this case, the novel use of technology is using generative AI to create the character dialogue in the game, increasing the interactivity of the game for the player. My criteria for whether or not my contributions are good is if they are useful in moving the project forward and don’t introduce extra problems that need to be solved. Ideally, I want all of my contributions to the project to be frequent and useful ones, as I want to make sure I’m not holding the rest of the group back or slowing them down.