Hari Koirala

Senior Design

Senior Design for me is about collaborating with a team to make an idea possible. For me, I’ve been interested in Game Development since high school and have made tiny games but never worked in a big team trying to develop a large game. This project is about learning to work with others and learning the tools of trade better. With talented teammates and students, I will be able to rapidly improve how I approach making games by getting their insights and ideas and applying them to my daily use. The project will also help me develop crucial skills in project management and team coordination. Ultimately, this experience will be a significant step toward achieving my goal of creating impactful and innovative games in a professional setting.

The classes I took such as Data Structures and Algorithms and Computer Systems will be immensely helpful when developing games. For example, almost all of how graphics are computed to screen or how data is stored is directly taking ideas from Data Structures and we use algorithms to efficiently get and store data for later uses. I understand how an computer works on a low-level from how a program loads to memory to cache lines alignment that could mean good or bad performance. I am good with collaborating with others because first year classes such as ENED taught me to work with others to be able to solve big problems. These skills will be critical in a team setting, where effective communication and coordination are essential for successful game development. Combining technical knowledge with teamwork will enable me to contribute effectively to our senior design project and deliver a high-quality final product.

I have experience developing small games using various tools and frameworks, including SDL and SFML with C++. These tools have allowed me to create interactive games and understand the fundamental principles of game development. My projects typically follow a structured pattern: Initialize, Render Loop, Free Resources, and Quit, which ensures a systematic approach to game design. During my Personal COOP Project, I worked with a mentor through Discord, demonstrating my ability to communicate effectively in an online setting. This experience showed that even remotely, I can collaborate efficiently and convey ideas clearly. The combination of my technical skills and communication experience has prepared me to tackle more complex game development challenges.

I am motivated and excited to participate in this project because I have passion for game development and given an opportunity to demonstrate and create games with a talented team, I am even more excited. The project allows me to apply my technical skills while also expanding my experience in developing an larger, complicated game. There are many chances to contribute such as make game logic or doing graphics and with me, I learn from other people doing various functionality. I want to tackle challenges that pushes me to learn more and I am excited to see how our efforts will lead us to making an excellent game. This motivation will drive the project forward and with commitment and hard-work, I am confident in delivering a high-quality game. By setting clear goals and regularly reviewing our progress, I will ensure that our collective efforts are aligned with the project’s objectives and lead to a successful outcome.

My approach in designing a solution is understanding what the projects requirements are and planning out the development phase. I will break down big processes into smaller processes that are more manageable, such as assets, game design and game programming. I want to use Iterative development with regular reviews and feedback from our mentor and between ourselves to ensure that the game evolves efficiently. My expected result will be to make a functional game that meets the project goals and requirements and something I could put on a resume that will attract employers. To self-evaluate my contributions, I plan to set milestones and access my progress to the goals, such as if I was assigned to do one functionality of the game, check if I made steady progress towards that and if I completed the task. There will be regular check-ins with the team and feedback from our mentor and maybe in the end, a playtest to see how our game turned out. We can gauge our project success based on these factors.