

From an academic perspective, our project will serve the disciplines of software and requirements engineering. We will focus on the development process and defining clear goals and documentation. I hope to refine my abilities to plan and execute a project, while keeping proper programming techniques and standards. In terms of Requirements Engineering, I plan to take gain deeper insights into determining and writing quality requirements of a system. Doing so will hopefully provide a strong appreciation for how project requirements are properly laid out and defined. Working in both of these disciplines will help me build on past classroom and co-op experience.

There are many classes and experiences that are built into my curriculum that will benefit me on this project, but there are two courses that I have taken so far that will probably be most impactful. The first course is Data Structure (CS2028), not only did this class teach many of the important foundations of software engineering but it was critical in teaching me how to work with complex data and communicate issues to group members while solving a common problem. The class that will feature heavily in how we write requirements is requirements engineering (CS5071). Everything learned in this class will play a factor in this project, but most specifically how to write clear and descriptive requirements and refrain from common requirements mistakes. Since I am taking this course concurrent to the first semester of Senior Design, I hope that this continues to be a learning experience throughout. It should also be mentioned that I believe I think Software Engineering (EECE 3093) would also have been very helpful for this project, but I am scheduled to take this course in Spring 2021 due to schedule rearranging cause by the ACCEND pathway.

Since starting at Cincinnati, I have had the opportunity to co-op at two different companies, L3-Harris (Software Engineering Co-op) and 84.51 (Software Engineering Co-op). While at L3-Harris, I was working software engineering projects that were under government contract. This typically meant projects had very explicit requirements that needed to be met, this will lead to requirements that are quality in detail and structure. During my time at 84.51, I worked on interwoven web and backend applications, which required a vast level of understanding and documentation. This is a very important topic to consider when beginning, because by handling these types of things properly from the very beginning a lot pain can be prevented later on. Projects there were also managed in agile, this is sort of a juxtaposition to how requirements were managed at L3Harris where those were broader and more based on a final project rather than just a sliver of work.

Coming into this project, my partner and I have both seen gaps in the ways that students and professor interact while trying to emulate a classroom setting. Teachers are constantly in the dark on how their students are understanding current topics while students struggle to ask questions through chat boxes when something may not be clear. We have seen this as an area that students and teacher alike could benefit from improvements to. Designing a solution to this problem will involve talking with students and teachers alike to figure out key problem areas in remote learning. After combing this data, we need to figure out workable to solutions to the problem, including clear requirements for how we can develop a tool to minimize these problems that students are seeing. I expect this project to result in an application to better help teachers communicate to students during class and for students to better learn the material.

Evaluating the status of the project and determining done will hopefully be made easy by the requirements written in the planning stage of the project. Having laid out specific requirements and definitions of completeness will make the process of tracking progress and giving a final verdict on completeness rather simple. Deciding on whether or not we did a good job will most likely be driven on if a group of goal users, students and teachers, think the application is usable and improves the prospects of remote learning. When it comes to gauging contribution, having a small group will play to our advantage. Ryan and I will have direct communication over expectations and track work through GitHub. Personally, I will plan to hold myself to a set time and increasing degree of completeness every week to ensure I am putting my best effort forward for this project.