Our senior design project is a chance to synthesize our educational experiences over the course of the last 5 years. Being able to choose our area of focus allows us to explore an area that we are passionate about. Additionally, it is a chance to develop a resume worthy project to discuss with future employers. The senior design project introduces us to large scale software development that is often used in the real world. Being able to gain relevant development experience will enable us to jump start our career. Combined with our co-op as well as classroom experience, our senior design project is a chance to showcase the skills we have learned in an area that we are passionate about.

During the development cycle of our senior design project, several courses that I have taken will benefit us. First, as this is a python-based application, Python Programming (CS 2021) gave us a foundational knowledge of python that we will be able to expand upon in this course. Next, Artificial Intelligence: Principles and Applications (CS 4033) introduced us to theoretical principles that we will be able to utilize in this project. Finally, Design and Analysis of Algorithms (CS 4071) will allow us to implement optimal algorithms while collecting and filtering our data. Other classes that will be beneficial include Data Structures (CS 2028C) and Software Engineering EECE3093C. These courses, combined with all the other courses that we took over the course of our 5 years will help us complete this project.

In addition to our classroom experience, co-op experience will also be beneficial in the development of this project. My first 3 co-op experiences I completed at Siemens Digital Industries Software in Milford, Ohio. While here, I participated in an agile scrum team and utilized: JavaScript, Java, C++, and Mendix. My final 2 I completed at 84.51 in Cincinnati, Ohio. In addition to being on an agile team, I used Grafana, Automic, Azure, Snowflake, and PySpark. I expect to apply these skills learned by participating in regularly scheduled meetings and collaborating on the needed programing for this project.

For our automated note taking bot, I am excited to participate in this project because I hope to go into the field of data science and data analytics after graduation. Participating in a project using machine learning and artificial intelligence will give me an opportunity to explore a field that is used frequently within the industry. Our expected results is to be able to take a given video off of Kahn Academy or another open source video education platform and return a notes document to the user. For a preliminary solution, we plan on making use of well documented python libraries such as TensorFlow, PyTorch, and possibly Selenium. Ideally these videos will already be pre transcribed. We will take an iterative approach and set milestones to reach to keep pace with project deadlines.

When it comes to project evaluation, we will have several metrics to evaluate success. We will know our project is successful once we are able to generate and return an automated notes sheet to the user for any given video off Kahn Academy. I will be able to self-evaluate my contributions based on analyzing GitHub history and eliciting feedback of other group members. It is expected that all group members contribute equally over the course of this project. Additionally, we will expect that all code is formatted and well documented. Once these steps are completed, we will know that our project is complete and successful.