The senior design project our team is going to develop will be a mobile application. We decided to choose this area because we have all experience in some sort of software development. For me personally, I have created prototypes but have never accomplished developing a mobile application from the ground up. I am also intrigued about how we can involve cyber security in it from the early stages instead of after the product is completed. The application we are thinking about developing is Seek and Hide. This will be a social application where people will be notified if there is someone who has the application close to them and will need to try and identify the user while also not getting discovered by the other user.

In my college career, I have taken the mandatory courses for the Computer Science curriculum. The only classes that differ from my peers are the electives that I have taken which are for the completion of my cyber security certificate. Some of these include Cyber Defense Overview (CS5155), (EECE5129) Distributed Operating Systems and Algorithms. In the cyber Defense course, I have learned about how to keep applications safe and also how to test and be compliant with security standards. In the operating systems course I am currently taking, I am learning about how to attain efficient and successful processes which is something that I can implement in our project. In later courses, I will learn more about malware analysis and security vulnerability assessments.

In my first coop experience, I started as a software developer at Siemens DISW where I worked in automating test cases for a cloud solution for an entire year. I gained some experience in angular java, selenium, mendix, and I also understood the importance of quality assurance and testing. For the last 3 coops, I worked at GE Aviation in different roles. My first role was as a secure collaboration UX tester, where I learned the importance of planning and envisioning the security of applications that would be introduced into the company. I was able to set up a proof of concept and research the needs of the users while also fulfilling security needs. For my second rotation at GEA, I had the role of ADS cyber security cloud architect. In this role, I modified the architecture of an application that would be deployed in AWS. For my last rotation in the same company, I was a full-stack developer for a customer portal application. In this role I gained a lot of experience in the front end and backend of the application, I was able to modify the database and modify the website itself. I expect to apply all of these skills to our envisioned project in the same way I applied them at my rotations.

Mobile app development is something I have tried whenever I participate in hackathons, but I believe that having a team that is interested in the same idea and invested in it will have much more progress and even completion by the end of the capstone. I believe that our team should be capable of having a functional application by the end of our project. I think we will need to have constant development of the application if we want a functional product. For this reason, I believe that we should go with prebuilt solutions for our needs. An example of this might be using a template for storing the application data, such templates can be found for AWS and Azure deployments. Because of this going for a cloud approach would be ideal since it would be more practical.

Our contributions can be tracked and evaluated with a backlog and user stories with the aid of some applications like Rally or GitHub. The size of each user story will determine how much work someone has completed toward the project. With this being said it will be essential to have good planning from the start of the project. The application will be done when more than 2 users can sign in to the application and seek each other. We will have done a good job if the application has an appealing UI, smooth usage, and it is something that can be put in the Apple store. Lastly, I will self-evaluate my contributions by ensuring that what I develop has the intended goal of the user story and by getting feedback from my colleagues.