

## Senior Design

### Assignment 3 Individual Capstone Assessment

Austin Schoster

Senior design is a culmination of your college experience. To me, it is all about your growth academically and as a person. To be successful in this project, you must utilize all the skills you learned and developed over the last few years at this university. Although it requires you to use all the knowledge you gained, it is also a fantastic opportunity to grow those skills further and learn new ones. It is a chance to make connections and to do something interesting and fun, and it can make a real impact on the world. You get out what you put into senior design, so to me, it is vital that I use it as an opportunity to showcase my skills and learn new ones, all while doing something I enjoy. Our project is an app that will provide a personalized music experience to its users. Since I am very interested in music and well-versed in app development, this combines both my academic experience and personal interests, which is precisely the experience I hope to get out of senior design.

My college experience will be critical to guiding me along my senior design project. For example, when taking Software Engineering, we spent the semester working on a software project with a group. This experience taught me how to manage a large-scale project with a group in an academic environment, which is precisely what we will do during senior design. It also taught me about web and mobile development, which will be helpful when developing our senior design project as we plan to make a web or mobile application. Additionally, I am currently taking User Interface I, and we are learning how to develop web applications and how to create compelling user interfaces, both individually and in groups. The skills developed in this class, which include creating user interfaces, web design, and working in groups, will be critical to developing our senior design project since it will require web development in a group setting. Overall, my academic experience will be vital in ensuring that our senior design project accomplishes its goals.

My co-op experience also provided me with valuable knowledge that will be utilized extensively during our senior design project. When I was at London Computer Systems, I learned about how to use Git and other project management methods, which will be very important while developing our project. That experience also taught me C# and working with other teams of developers, which helped me develop technical and communication skills that will be required for our senior design project to succeed. Additionally, during my co-op at Martin and Associates, I learned a lot about web development and APIs, which will be required for our project to achieve its desired goals. I also furthered my knowledge of C# and SQL, which will be useful if our project requires database or backend work. Overall, my co-op experience greatly added to what I learned while in class and helped me learn and develop both technical and soft skills that will be necessary to develop the application our group would like for senior design.

Our project is going to be an app that will create a personalized playlist of music for a user based on various factors such as listening history, location, mood, the amount of new music they want to listen to, and more. Some features currently exist that aim to accomplish this or something

similar, namely the DJ and enhanced shuffle features on Spotify. However, our group found that these features were inadequate, and most people end up not using them because they are inaccurate. I personally listen to music all the time, so my motivation for this project stems from having to skip loads of songs and not having an enjoyable listening experience because I am not in the mood for them or because they are bad recommendations. Our app aims to solve this problem and help listeners find new music that will appeal to them at the rate that they want. It is meant to be the ultimate personalized music app where you won't have to skip songs or worry about hearing music you don't like.

Our preliminary approach to this project is to either create a web or mobile app that lets users input some information to help customize their experience (mood, slider to control new music, etc.) and then pulls data from Spotify to help understand their listening history. We will then use AI to gather this information, along with other factors such as location or weather, to come up with a playlist of both the music they have been listening to and new music that fits these parameters. The expected results will be that this app is able to create a playlist in Spotify that contains music fitting the previously described parameters. It will be considered successful if the user does not skip any songs when listening to this playlist. We will self-evaluate our app by using it ourselves and determining how much we enjoy the playlists it creates. Once the app is able to create playlists consistently that we enjoy listening to throughout the whole playlist, we will consider the project done and a success.