Capstone Assessment

My Senior Design Project is the revolution of ordering pizza. Of course throughout many events I've been a part of, be it on-campus events or a party, there have been many times where pizza is present. But when I saw that people only ever ordered cheese and pepperoni, I wondered if there were a way for people to get the toppings that they really preferred. That was where the idea for a group pizza ordering app came from. What2pizza will be the future of pizza ordering, where people don't have to settle for pepperoni. Users will have the ability to create groups, pick out toppings that they like, and everyone can have the best pizza for them.

The problem that this application hopes to solve involves set theory. Set theory is observed behaviors between collections of data. In this example the data is what a user likes and dislikes on their pizza, and we need to find intersections between many different users to find where everyone agrees. From there we can create pizza orders when we create pizza from users' set differences. This process needs repeated across all users, and we will create new sets that represent the generated pizza orders. I learned about set theory from my Discrete Structures class.

The project will be built as a mobile app. We will be using React Native, a framework wherein we use React, a library for building web apps, to build the UI for a mobile app. I learned how to use React during my time at Microsoft. For the backend, we will have to write an API to give access to a database, through a framework that we are yet to decide on. I gained experience API design during my time at HubSpot. Putting these together I will be in a full-stack role for this project.

I'm excited to take on this project because it is the kind of product that I know I would get a lot of value out of. Given how much pizza is ordered every single day across the world, I know that there are a lot of people just like me who could get use out of something like this. For a preliminary approach, we can make a simple system where users can create groups and input pizza preferences, and from there we take a simple set difference across all the likes/dislikes to get a pizza order. This could demonstrate the value and idea of the app but would be missing a lot of features; mainly not having precise pizza orders that would cater to the individuals. The aforementioned algorithm would create many pizza orders that satisfy everyone's needs generally rather than individuals specifically.

The expected result is to have an app working end to end that has the aforementioned functionality. We can determine success not only by if the app works, but if people really want to use the app. The app is only done when this is reached; When people reach for the app first before ordering pizza. The only way to know if we did a good job is what the users think. I think we should ask users directly what they like and what can be improved on once we start rolling it out. Individual contribution could be measured quantitatively like lines written, but in reality qualitative factors like contributed ideas and deadlines being met are what push the needle, and will be the ultimate decision factor.