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Learning Gains from ENGR 110

Having an actual customer to make a product for was very different than making a product for myself. There was a set of requirements that the product had to contain, and we could not simply make changes to that set of requirements whenever we felt like doing so. There was a certain process of interacting with our community partner, where, if we felt like the app needed a certain change, we would present our idea to her, discuss with her, and have the idea accepted, altered, or not implemented at all. Also, because we were making an app for the community partner, we needed to ensure that we followed all specifications; we did not want to make an app that was useless. There was also an added sense of urgency to work on the app, because we had someone to keep updated with our progress on the app. We could not simply work on the app the week before it was due. We had to keep working on it throughout the quarter so that we could discuss changes with her, or alert her of problems as they arose.

We did not work with major public organizations. The only main public organization that played a role in our app is the FDA. As our application dealt with handling food, it was crucial that event planners and caterers had correct knowledge of how to handle the food before posting it on the app for other students to come pick up. Thus the UI team made a hygiene and food safety manual, which is included as a page in the app for event planners and students to read. As students could have certain food allergies or dietary restrictions, we also had to ensure that the

app would not have misinformation about the food. That is why we created allergen tags that specified food was a certain “allergen-free” instead of “contained a certain allergen”, to reduce the chance of event planners making an error.

For this project, I not only had to work in a team with four other members, I also had to collaborate with the UI team of five people, and with Lindsey. I have personally never worked with such a large team for such a long duration. I was the Team Communicator, and my role was to communicate progress updates between the UI and Teach teams. I understood that communication truly is key when undertaking such a project, in order to avoid unnecessary confusion. I learned how necessary it is to keep everyone updated with progress and results, otherwise people start working on different portions of the project without utilizing updates made by others, leading to a decrease in efficiency and a waste of time. Towards the end of the quarter I was much more active when communicating between the teams, and despite being introverted and shy, I certainly feel like my project management skills grew in this area.

I am a first-year COEN major, so I have not yet had much experience programming in different languages or building apps. Through this team project, however, I was able to gain much more exposure in this field. I learned how to implement an app through Flutter (using the Dart programming language) on the frontend, Node.js for the backend, MongoDB for the database, and Heroku for the server hosting. I do not think I could ever have taught myself how to successfully use all these different platforms to create an app in 10 weeks; however, through the peer-coding sessions we had as a group and the overall friendly, helpful, and collaborative team environment, I was able to learn much more than I had thought possible.

Innovation results in new and helpful methods or solutions to problems society is facing, which requires identifying problems, and engineering a solution to them. Creating an app with a group of nine other people, for a community partner, with the end-goal of implementing it on an actual university campus has given me a new perspective on engineering. Quite literally everything we see around us is the result of innovation and innovative thinking, design engineering, collaboration, and hard work.