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Senior Design Project
Final Self-Assessment

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When working on our Senior Design Project, our team decided to split our work into three main parts and I was first charged with creating the user database, creating the sign up and login functionality. After considering multiple frameworks, our team settled on Django for our backend database. I set up the database with a custom user model that will contain the necessary personal and health data for our nutrition calculations. This was followed by making a placeholder login and signup page so I can check to see if I have the logic set up correctly and I can register new user into the database. Then, I transitioned into integration as I have to replicate my HTML pages in Django using React for front end. Once this is finished, I made sure that the API framework was working for both front end and back end. The information from the API calls is then used to implement authentication login site wide and displayed where necessary.

As I worked on our database, I was applying my knowledge in Python to learning Django, cutting down the time needed to get myself acquainted with the new framework. I also picked up React and working with API as I worked on integrating back end and front end, both of which were implemented help from online tutorials and documentations. This is the first time where I have to work closely with API and networking, so it was a difficult learning curve at the start. I found it frustrating when I ran into interactions that I was not too familiar with and had to spend a lot of time debugging them. It did, however, paid off as I was able to implement the authentication and error handling logic that we wanted.

Our final product that we demonstrated at the CEAS Expo was not our full vision. We had to cut down on some functionalities as we did not have enough time to implement every planned feature. However, we made sure that the core elements are present and work together seamlessly. Our front-end design reflected our vision of the homepage, although some components had to be hardcoded. The application was also able to display the nutritional data that we got from the user in a way that is consistent with all accounts. Other functionality was present, but was scaled back due to external constraint, like the meal recommender not displaying pictures.

I found that our group work was, in general, smooth. We were able to meet online regularly to work through our problems and provide feedback when needed. We also made sure that any scaling down or cutting of features came after discussing and carefully considering our alternatives as a team. I do believe that our approach of division of labor was a positive experience as we had more autonomy and control over our assigned parts, but it came at a cost of harder integration process as we had little knowledge of other's work and had to sit down and talk through some of the basics as we integrate. I think Chau did a great job with handling the data and writing the recommendation algorithm, and Terrence made the user interface really eye-catching and intuitive.