Dear Scott,

Thank you very much for the opportunity to work on your project. Such a complex system has pushed us all individually to further our skills as engineers. Since the project required components from many different fields of study, we became more well-rounded students as a result.

The project as a whole was a good challenge and a great test of our engineering ability. The Automated Microbial Analysis project was originally designed to automate the process of counting bacterial colonies on petrifilm samples, sort each sample, and then log the results to an online database. We implemented this system to the best of our ability through the use of a Delta robot mechanism. This robot was chosen for it's simplistic design, fast response time, and accurate positioning. Through the usage of custom software on a raspberry pi, we were able to create custom computer vision models that detected bacterial colonies and counted each to a csv file. This main system communicated with a custom embedded controller which ran the GRBL firmware to control the main hardware mechanisms. To ensure everything was properly working, the entire system was 3D modeled and custom designed to meet the spec given to our team.

Your feedback was always constructive and supportive, which let us be comfortable asking questions from throughout the process. This led to an open line of communication that allowed us to ask as many questions as needed and to always get swift replies. We also appreciate that we were given the freedom to make decisions about how the project should progress. This was crucial for our learning process because it allowed us to make some mistakes, to learn from them and adapt quickly.

We would also like to extend our thanks for all of the support you have given us. You were always understanding of any setbacks and quick to respond to any outreach from our group. Such communication skills did not go unappreciated amongst our group members.

Thank you again for everything,

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