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Senior Design

Self-Assessment

A. My individual contribution to the project was originally meant to be setting up the internal wiring of the gun to take the signal from the Arduino to fire. However, due to the modification safeguards implemented by the manufacturer made it difficult to mess with the wires, we decided to scrap that idea because we didn't want to risk breaking the gun. My other semi-major contribution, the webapp that was to be linked to the turret, was also dropped due to time issues. After these decisions, I took on more of a "everyman" role assisting where I could, such as writing the script to split videos into images for model training or designing the poster for the expo.

   I think I did build on the skills identified last fall, as we did a lot of python programming and learned a lot about the libraries we used. I think I rebuilt my competency with Arduino, as it's something I've worked with previously but not much lately. I also learned how to use Jupyter notebooks, and built on my previous Python experience. My major successes were getting the poster made and looking nice and writing the video split script. My major obstacles were the wiring issues and the amount of time spent disassembling the gun and learning about its inner mechanics.

B. Our group accomplished the successful creation of the turret, as well as a set of ideas to improve on our current model. We began implementation of some of these ideas, but decided to drop a couple of them before the expo because we wouldn't have had time to make sure they were working. Namely, we added a lazy susan turntable to assist with balance and rotation issues, but we weren't able to finish implementing the design for it that we came up with due to time constraints. However, other things, like the final version of our facial recognition model, were able to be implemented successfully before the expo.

   I admittedly didn't learn much about group work that I didn't already know, but I gained plenty of experience trying to schedule lengthy meetings around 4 different schedules. While finding times to meet in person was difficult sometimes, we worked well together, as we've all been working on projects together for years now. I think I probably did the least amount of work on the project, as my major contributions (the internal wiring and webapp) got scrapped, so instead I worked on a lot of small contributions while everyone else had their larger projects. I also think Jared did a great job with all of the woodworking, as I know it was a lot of work and he did most of it by himself. Austen also spent an unreasonable amount of time getting the facial recognition to work as well as possible, and definitely deserves props.