Major Changes: During finals week, I had time to meet up with Professor Liu to talk about what resources I’d need to get started and get introduced to the codebase. During this meeting, we had a more in-depth discussion on exactly what tasks I’d be doing. The only major change that occurred was in my understanding of the tasks, as I now have a deeper understanding of what I’ll be doing. Specifically, I will focus more on gaining a deeper understanding of human pose prediction, especially across different subjects, and may investigate ways in which I can apply meta-learning to do so quickly when new subjects are being observed. If I make good progress on this task, I will work on trying to translate what the model predicts the robot should do to actual instructions for the robotic arm.

Accomplished So Far: So far, I have been reading online resources on meta-learning to familiarize myself with the theory behind it. I have also been reading some research papers that my professor gave me on trajectory projection, specifically for human intention prediction. I have also been given access to the codebase, and have taken a brief glance over the sample data and demos.

Surprises: There have not been any major surprises, as everything I’ve done so far was expected.

Revisions to 15-400 Milestones: Given my new knowledge of my tasks, I believe my 15-400 milestones will change to focus much more heavily on human trajectory projection, and thus will require more time on this. Then, actually applying what the model learns to the robotic arm’s movement will be a much more minor part of the research, and may be considered the 125% goal.

Resources Needed: I have almost all of the resources that I need so far. My professor has given me several papers to read through on adaptable intention and trajectory projection, along with links to the code on GitHub for the project. The code for the project is not yet uploaded to the GitHub (only the data and demos are currently available), so I am only waiting on the professor’s other student to upload the code to the codebase.