1. What have you achieved since your project demonstration?

Since the project demonstration I have begun training on an Amazon instance so that training will go more quickly. I have also begun training an agent on output from another agent as a form of communication.

2. How have you addressed the concerns raised during your project demonstration?

Training is much quicker on the AWS instance so I will be able to test things more easily now without waiting a week each time I run it.

3. What potential issues do you foresee that would hinder your ability to meet the final project deadline?

One thing is that I forked someone’s github to get the basic architecture for the neural networks, and while I feel like I’ve been clear about that the whole time and the first spec said to use existing architecture so we can focus on multiagent aspects, I noticed the webpage said we are not to use anyone else’s code, so I hope that’s ok or I can rebuild the neural network architecture with my own code.

4. I chose Choreography:

a. How you might incorporate the topic?

Choreography in my project could be integrated into my project by training the neural nets with roles in place. That is, each net (agent) would have knowledge of its role and the roles of the agents communicating with it. Maybe the importance of the message could be modified based on the type of role, so that for example a guitar agent would value information from a bass input less than its own input.

b. What would be the advantage of adding the topic to your project?

Using choreography would allow agents to specialize and realize what is important from other roles. Let’s say a guitar agent received an input from a bass agent. Without choreography, the guitar agent would think it previously played this low note and would be confused, whereas if it knew that the bass played the note, it could keep doing its higher-pitched playing.

c. What would be the disadvantages of adding the topic to your project?

There might be some overfitting over specific bass lines for example. I think using choreography in conjunction with a way to “lower the resolution” of say a bass line by just communicating the chord of the measure rather than the specific notes, this disadvantage could be avoided.

d. What would have to change about your project to incorporate the topic?

The agents would have to be trained on this type of message passing, which would take a while, but maybe it’s worth it.