**Monday, September 11th, 2023**

I wrote up the Research Plan for my Proposal.

**Wednesday, September 13th, 2023**

I proofread my proposal and verified that some of my old simulators were still working on my computer.

Towards the end of the period, I helped Eric understand the basic ideas in the derivation of backpropagation for his reinforcement learning project. The main ideas I emphasized were the idea of finding the partial derivative of error with respect to a certain weight or layer because as well as the idea of gradient descent. We also discussed the difference in training procedures with a neural network vs. reinforcement learning. A Deep Q Network, for instance, attempts to map an action to reward with the goal of choosing the action with the greatest reward. Every timestep of a simulation or action results in a new sample being propagated forwards and backwards through the network.