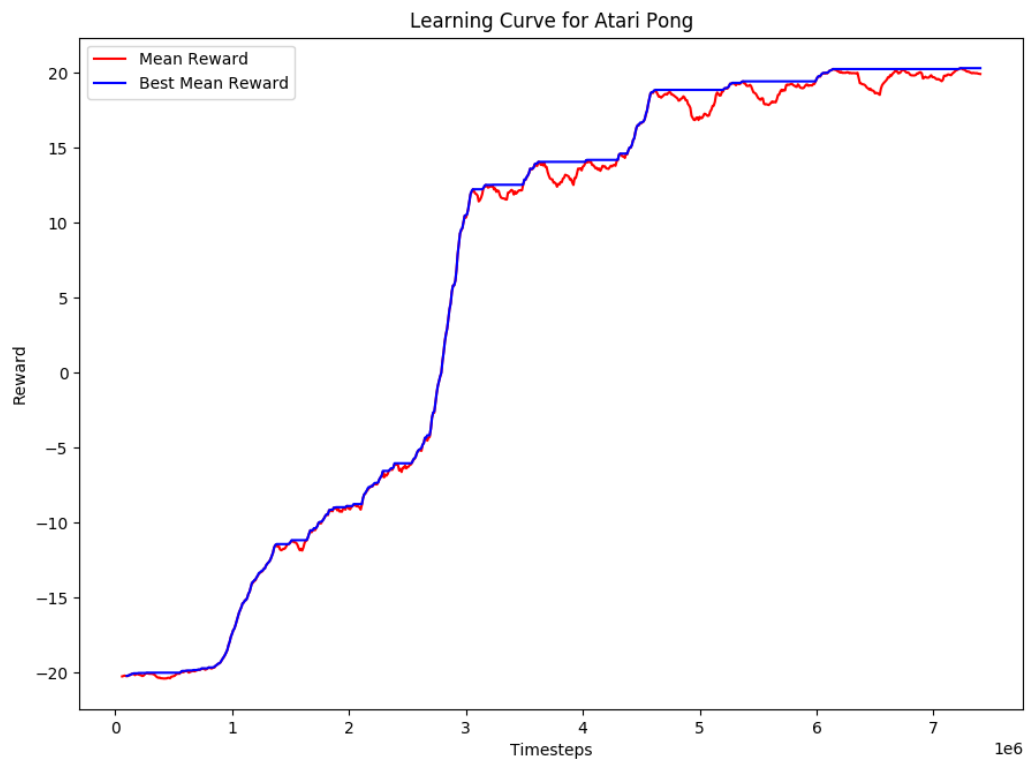


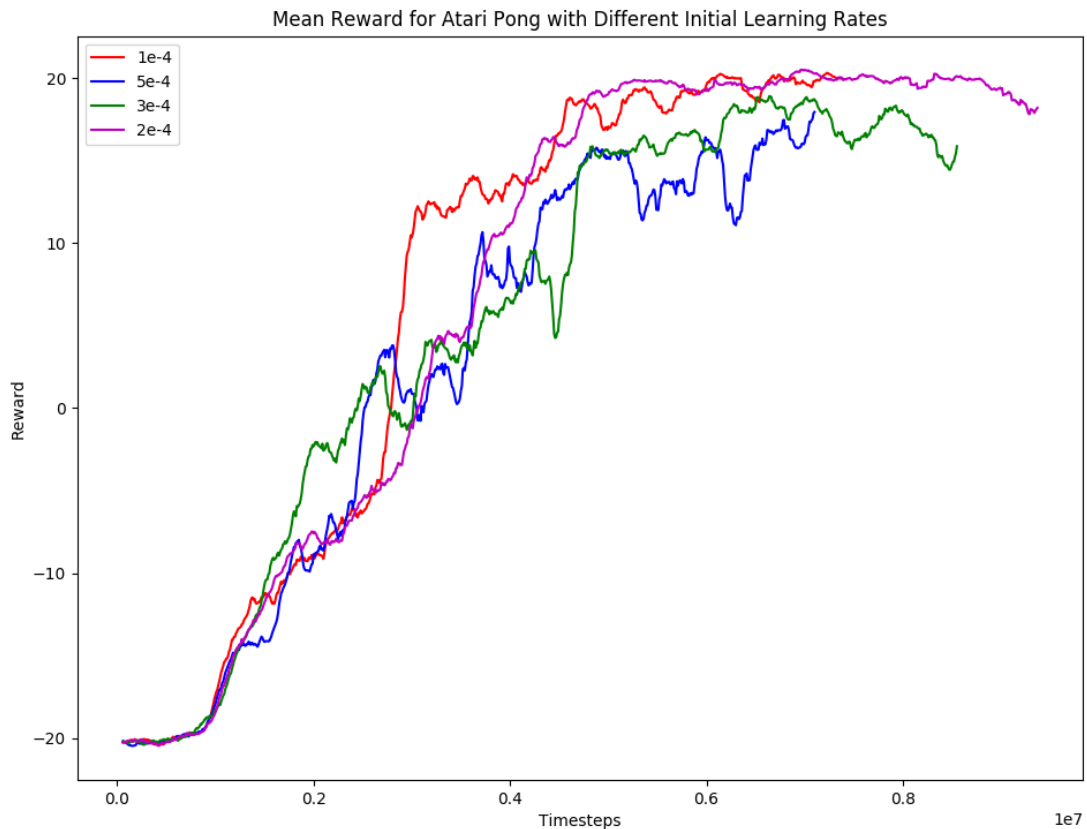
Class: Deep RL
SID: 24274554
Name: Varun Tolani
HW: 3

Question 1



The above performance is shown using the default hyperparameters provided for us

Question 2



I chose to experiment with the learning schedule of Q learning. I varied the initial learning rate between $1e-4$ (starter setting) to $5e-4$ and made a plot of the average reward over 100 episodes. All experiments were run for 7-8 million steps on `dqn.atari`. It seems that varying the initial learning rate does actually have an effect on performance of q-learning. The best setting would either be $1e-4$ (default) or $2e-4$. However from the graph above it is clear that $3e-4$ and $5e-4$ exhibit substantially worse performance.