

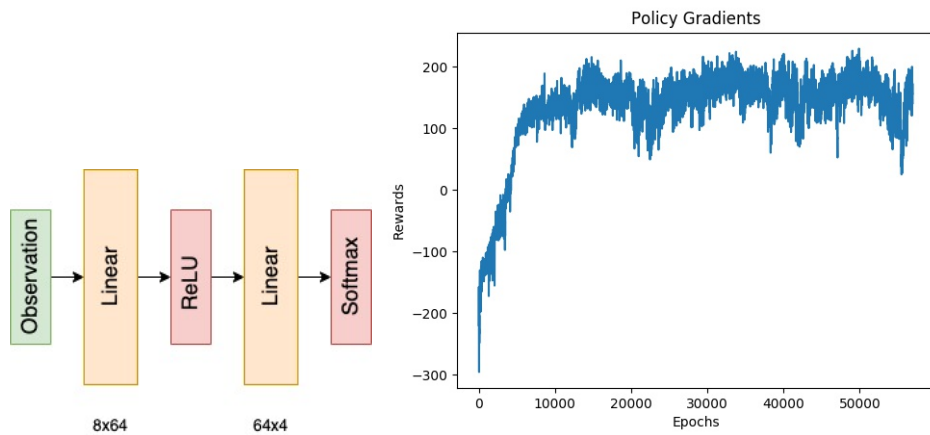
Applied Deep Learning: Assignment 3 - Deep Reinforcement Learning

b07902047 羅啓帆

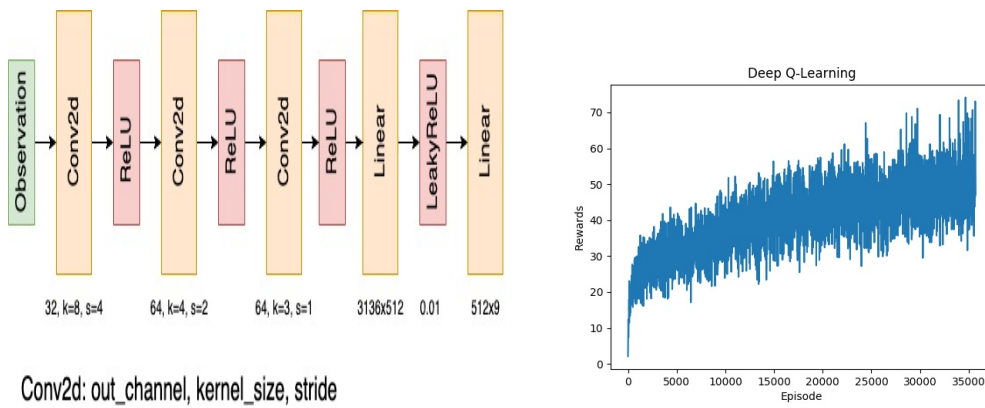
May 2020

Q1: Models

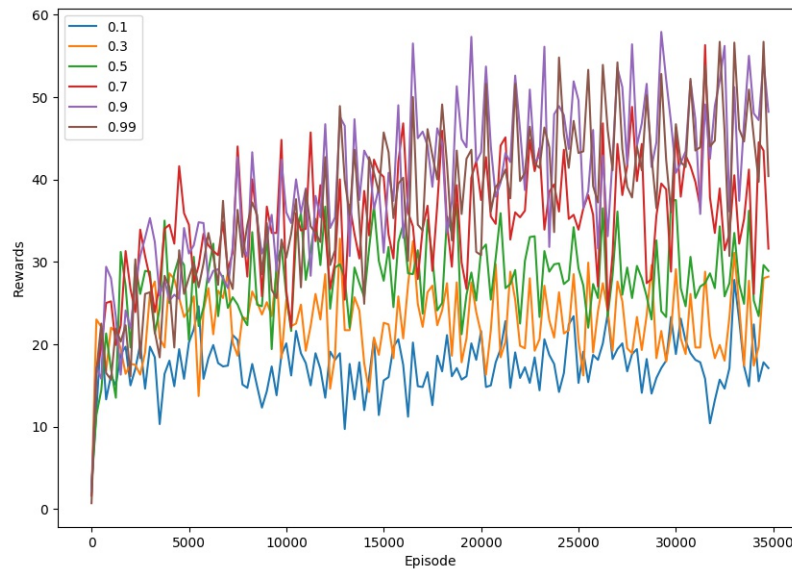
Policy Gradient



DQN



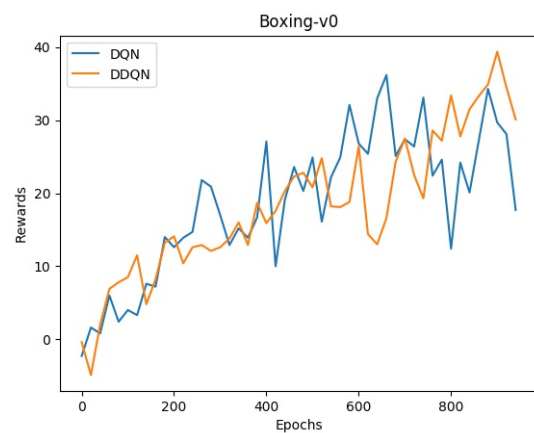
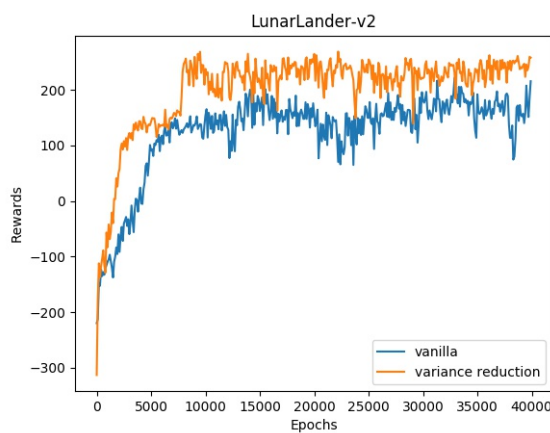
Q2: Hyperparameters of DQN



I choose GAMMA as the hyperparameter and play on MsPacman-v0. We can observe that if we discount the weight too severe, the model will not perform well as small GAMMA makes the model short-sighted. We can also observe that a little discount might work better than nearly no discount (0.9 vs 0.99).

Q3: Improvements of Policy Gradient / DQN

Variance Reduction & Double DQN



We can