

SOC: Reinforcement Learning Progress Report

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Week 1: I revised my knowledge of python and its libraries like numpy, pandas and matplotlib. I then watched a few videos on "Introduction to Machine Learning". I took a look over the probability notes as well.

Week 2: I began 'Linear programming' this week. My primary focus of study was the Coursera Machine Learning course. I watched several videos afterwards on reinforcement learning as well to get a feel for the same. I completed the first assignment, which involved making a model using linear programming, trained to predict house prices when provided several details about the location and size.

Week 3: Learning about multi-armed bandits was a wonderful experience as I got to explore various algorithms on how to solve the problem. It's interesting to think about. I then consulted several videos about each algorithm, trying to find which algorithm works best when.

Week 4: I spent most of the week reading about Markov decision processes. I referred both videos and some part of notes.

Week 5: I enjoyed my time reading about Q-learning and its algorithms: It's like MDP but with a twist. I then began preparing for the final project.

Week 6&7: This week was all about the final project and its training. I incorporated multi-armed algorithms and Q-learning logics, as well as experience replay, to train a model to play Atari's KungFu Master.