Oct. 24 Arrived at Edmonton

Oct. 25 First day in UofA. First Group Meeting. First Meeting with Rich (get to know each other; write down your thoughts habitually)

Oct. 26 – 31 First week in Edmonton. Reading through chapter 10 and 11 (on-policy control with approximation, and off-policy methods with approximation)

Nov. 1 Meet with Rich (*Journey to Find Intelligence; AI should be inspired by human’s thinking but not constrained; Do something that you find it calling; Successful graduate students should be abstract and thoughtful – be able to think independently* )

Nov. 1 – 4 *Implemented a Gridworld problem in tabular case; Implemented TD(0) Prediction algorithm, and TD(0) Control algorithm (Sarsa and Q-Learning) on this problem*

Nov. 4 *Finished the tile coding practice project (supervised learning using linear method with tile coding)*

Nov. 5 – 6 Read the eligibility trace section; *Extend the tile coding practice project to a general algorithm which can tile-code any 2-D input; implemented a TD(λ) Prediction algorithm with function approximation (using linear method and tile-coding) for MountainCar environment on a simple policy; Write programs to plot the result of TD(λ);*

Nov. 7 – 9 *Implemented ETD(λ) and can reproduce Sina’s result of TD method*

Nov 10 – 12 *Write programs to submit task to condor (Namely, for each lambda, run TD and ETD for various step size – 16 step sizes for each lambda that ranges from 0.0, 0.1… to 1.0); Get result from condor but still not draw the plot*

Nov 13 – 14 *Finished the Final\_Performance and AUC plots for both TD and ETD methods under 5 different lambdas on about 20 different step sizes*

*Nov 15 — 20 Re-ran the experiment with RMSVE; Organized plots programs (plot\_difference.py that plots the difference b/t TD and ETD for different lambdas; plot.py that plots TD or ETD methods with all lambdas; plot\_learning\_curve.py that plots learning curve of each individual parameter setting); Switching from Windows to MacOS*

*Nov 21 —22 Learning Linux command line*

*Nov 23 — 26 Finish extending TD and ETD to Control algorithms on Mountain Car problem (TD(lambda) —> Sarsa(lambda), ETD(lambda) —> nonameyet haha)*

*Nov 27 Learning Bash Script*

*Nov 28 -- Dec 4 Debugging the Control algorithm and run the experiments*

*Dec 5 — 10 Finished another problem — PuddleWorld and extending TD and ETD to do control on this problem*

*Dec 11 — 17 Finished two counterexample (spiral and varying lambdas). Tested that TD(0) diverges but ETD(0) converges*

*Dec 18 — 27 Finished another two environments (Acrobot and Cartpole) and tested our on-policy TD and ETD on those two programs.*

*Jan 1. — Feb. 15 Finish organizing results and writing. Prepared to submit to RLDM 2019*