

# Weekly Logbooks Consolidate

## Week 3:

In this few weeks after my partner and I received the topic and some reading materials from the professor, we discussed the topic and tried to have a deeper insight on the topic from the given materials. We also tried to find out the required skills for completing the tasks or problems that may occurs. Now we are still discovering the skill sets that we need and try to learn (e.g.: reinforcement learning, dynamic pricing) and we will pick up the skills we need before we actually start to work on the project.

## Week 4:

My partner and I are going to write our proposal, which will decide our working direction and an outline for us to follow. As our topic is about dynamic pricing and the power grid, we need to know the parameters that affect the pricing of usage of electricity and how the pricing system is working at the moment. The way we try to achieve in our algorithm is to have the best pricing over time that electricity being used with reinforcement learning.

## Week 5:

We finished our proposal this week and send it to our professor and TA for advices. In the proposal. We briefly described some problems of the topic and how we may solve it. Also, we wrote down the possible methodology which included TensorFlow, python Pandas to help us while try to make the algorithm. We will start digging into these methodologies in the coming week.

## Week 6 & 7:

Our tutor finished checking our proposal and he told us that we did a pretty good job on our proposal. We are going to see him on this Tuesday and we will try to solve the problems we've got in the proposal. We will start our work on the algorithm as soon as possible. I think our interim report will have a better description and content.

#### Week 8:

We finalized our proposal and the it will be handed in with our individual interim report. We are now practicing the syntax and libraries usages in Python to achieve the best we can on our algorithm. I also learnt more about reinforcement learning in different aspects and approach such as training an AI to play Atari games using OpenAI Gym by trying out the demos. Hopefully we will have a better performance when the real algorithm finished.

#### Week 9:

We finalized the proposal and individual interim report last week. We are working on our program implementation that they will be finished in the coming few weeks. After that, we will start writing the report and poster for the presentation soon.

#### Week 10 & 11:

We finished the analysis of the mathematical equations for the reinforcement learning algorithm. It will be implemented and tested soon.

#### Week 12:

We continued our work on this week after a lot of things happened in these few weeks and we are trying our best to finish the project even the situation is not as ideal as we want to be. We will continue our work on the project and posters.

#### Week 13:

Simulation finished

Organizing simulation results and data sets

#### Week 14:

Start writing the final report

Discussion on future directions

#### Week 15:

Finished individual reports

Making the slides for presentation

Recording of video presentation