5/7/2018 - 5/13/2018

**Q Table Learning model Qing Lin, Oi Lam Sou**

Qing and Oi worked on the Q Table Learning model. It now can select single or multiple units and not only can control the units to attack on different directions, but can also move to either up, down, left, right, top left, top right, bottom left, bottom right (8 directions in total). Now marines will run away from zealots when under attack.

[Github repo](https://github.com/qing8137/StarCraft2-Happy-Kitting)

<https://github.com/qing8137/StarCraft2-Happy-Kitting/tree/master/Testing_FirstMap>

**Deep Q Network learning model Chu-Hung Cheng, Siyuan Yao**

Chu-Hung and Siyuan made a now model based on Deep Q NetWork Learning. It is now under testing and optimizing. This model should perform better than the Q Table Learning model when learning how to win the 3VS2 game.

[Github repo](https://github.com/zxcvbnmditto/StarCraft2-Happy-Kitting)

<https://github.com/zxcvbnmditto/StarCraft2-Happy-Kitting>

**New map Yean Li, Siyuan Yao**

Yean and Siyuan made new map for our models to learn. With simple but carefully design, our models should have a faster learning curve on these maps than the 3V2 map. Then we can see the learning steps more clear.

**New features Chu-Hung Cheng, Nghiem Trong Van**

Chu-Hung and Nghiem wrote some features to improve the learning speed and minimize the possible states. By writing functions that calculate the distance between the marines and the zealots, we can simplify our game and should make the machine learns much faster.

**Reward optimization Qing Lin, Oi Lam Sou**

Qing and Oi worked on designing the rewards for our agents. With different rewarding system, the A.I. has different performance. However, the task is not done, we will keep optimizing the reward system along with other tasks.

**Learn API Yean Li, Nghiem Trong Van**

Yean and Nghiem worked on the pysc2 API. We now know how to select units based on their coordinates or the mini map coordinates. Health Points of all friendly units are obtained as well, we can get an numpy array of health points by call the API now.