Deep Q-Larning Network

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1 The Result of States Input

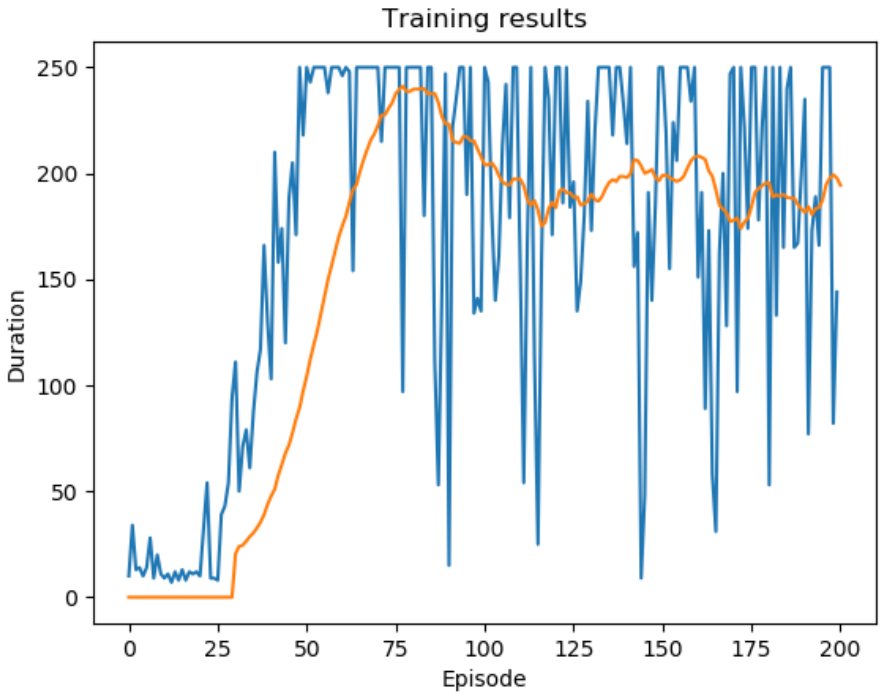

Figure 1: Scores and Moving Average (Window Size=30) of 200 training epchos

2 The Result of Images Input

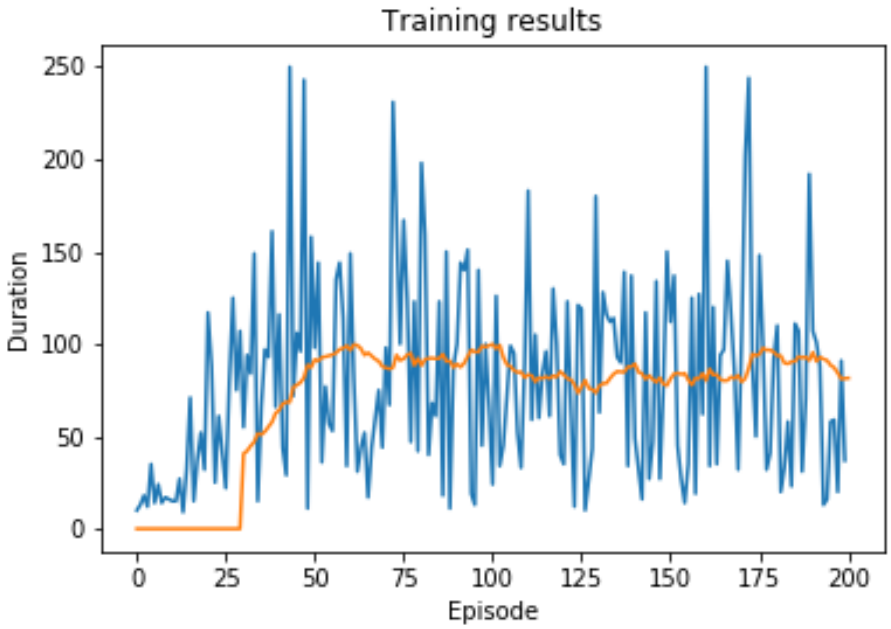

Figure 2: Scores and Moving Average (Window Size=30) of 200 training epchos

3 Empirical Comparison

From my results above, state input can achieve better performance than image pixel input (The image pixel inputs may need to tune the parameters more carefully). Besides, training model with state input is faster than training the one with image pixel input, which may cause by the complexity of deep network architecture.

What's more, the reinforcement learning cannot promise play well each time even with enough trainings. However, we can see the moving average of the scores has been improved as we train more epchos.