HW4-1 - Policy Gradient Report

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Model

Dense(80*80, 10)

tanh()

Dense(10, action_space_num)

softmax()

LR=0.02

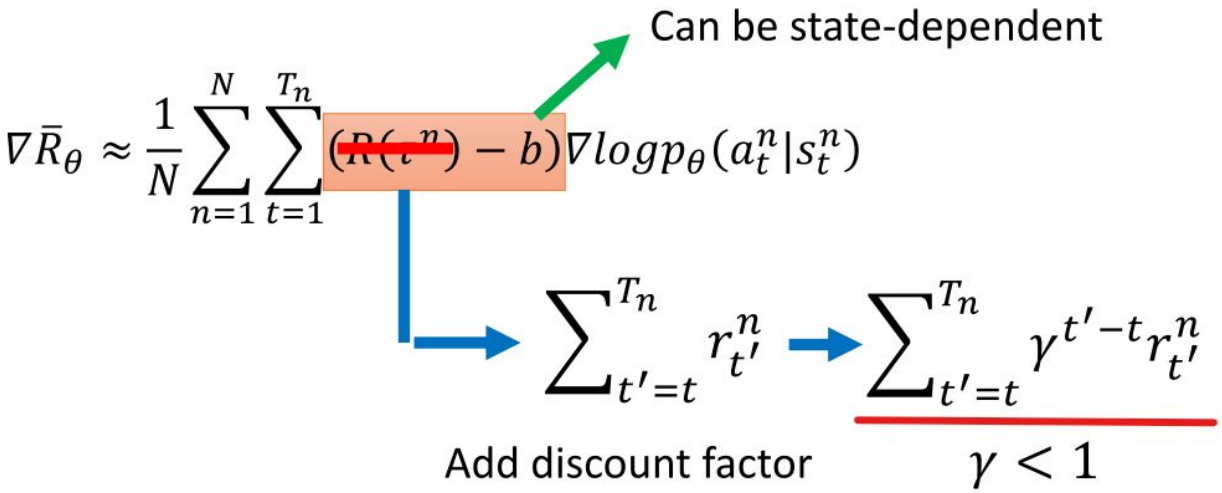
GAMMA = 0.99

Adam optimizer

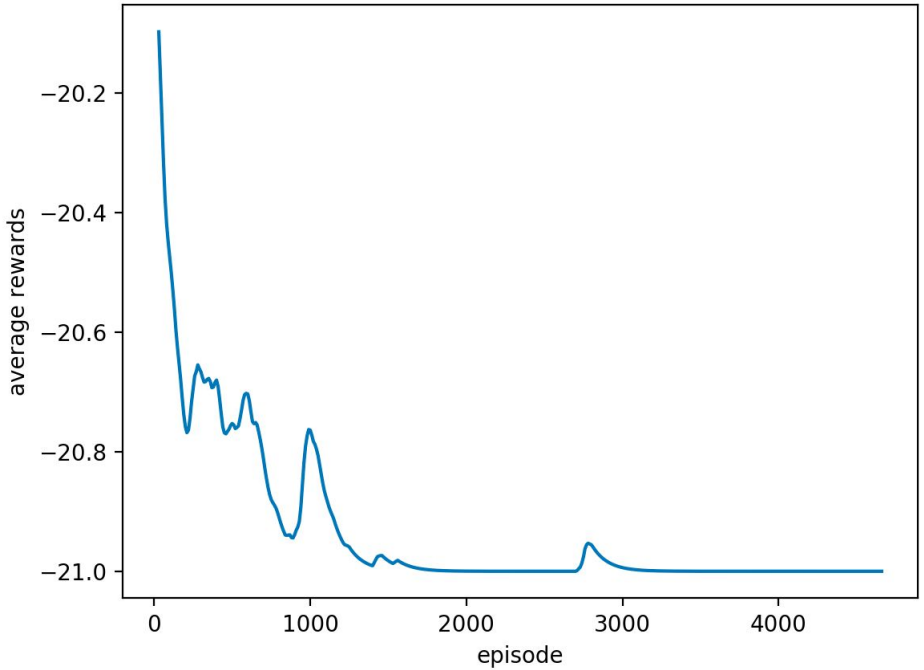
Prepocessing

- (210,160,3) -> (80,80,1)
- resize & down-sample the image
- set background to **0**, others to **1**
- **flatten** the image

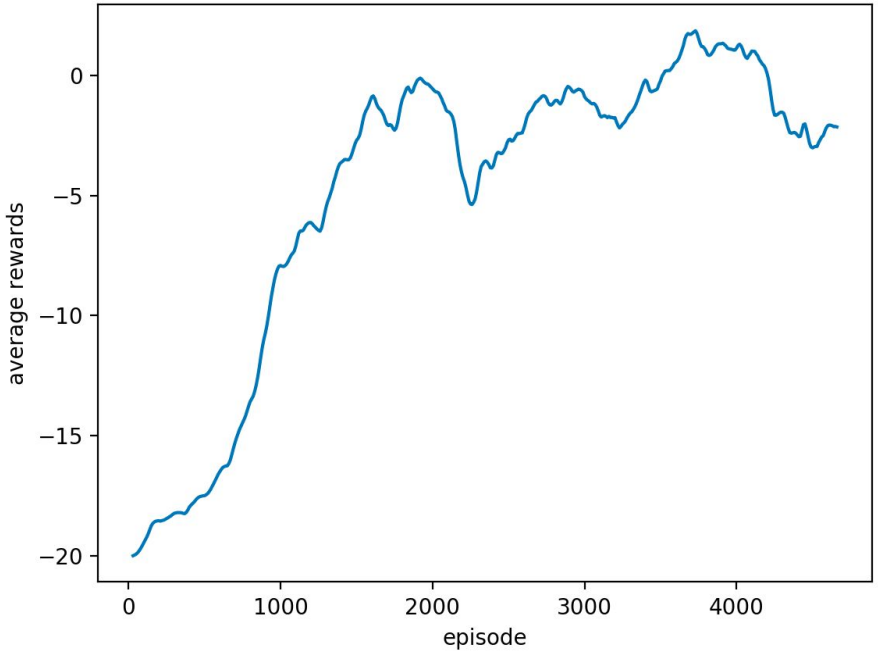
Tip - Variance Reduction

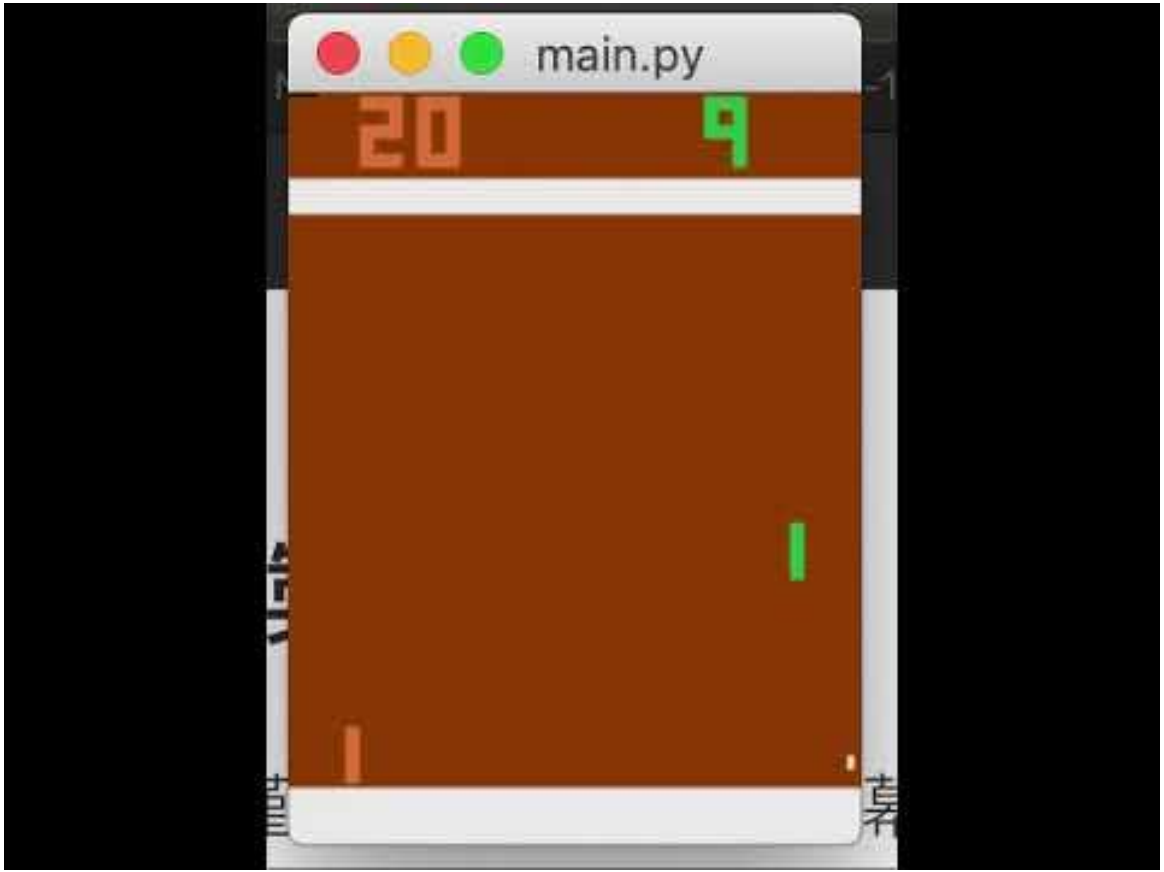


Learning Curve - Without Variance Reduction



Learning Curve - With variance reduction




main.py
20
9
1
1