

Parameter Name:

S: current State, A: current Action, R: Reward, S'=next State

W=weights of Separate target Network

Q\_Target\_Next Equation And Q\_Target:

$Q\_target\_next = \max_a \hat{Q}(S', A, W^-)$

$Q\_target = reward + (\gamma * Q\_target\_next * (1 - done))$

My Loss function and Optimizer is

Loss function =  $(1/2) * (Q\_Expected - Q\_target)^2$

Optimizer: Adam, Learning rate: 0.0005

Batch\_size=64:

My Qnetwork consists of this.

Input Layer vector:37 , hidden1 Layer size: 64 ,hidden2 Layer size:64, output Layer size: 4

My Plot of Rewards

Episode 100	Average Score: 0.97
Episode 200	Average Score: 3.52
Episode 300	Average Score: 7.54
Episode 400	Average Score: 9.50
Episode 495	Average Score: 13.03
Environment solved in 395 episodes!      Average Score: 13.03	
Score: 16.0	

