Deep Q Learning: From Paper to Code

Coding The Dueling Double Deep Q Agent Class

What We Need to Accomplish

- Memory, target network updating, model saving, and decrementing epsilon are unchanged

- Action selection is the same as dueling DQN

- For learn, have to combine V, A and use the DDQN update rule

$$Q(s,a;\theta,\alpha,\beta) \stackrel{\text{def}}{=} V(s,\theta,\beta) + \left(A(s,a;\theta,\alpha) - \frac{1}{|A|}\sum_{a'} A(s,a';\theta,\alpha)\right)$$

$$Y_t^{DDQN} \stackrel{\text{def}}{=} R_{t+1} + \gamma Q_{next}\left(S_{t+1}, \underset{a}{argmax}\, Q_{eval}(S_{t+1},a)\right)$$