
Algorithm Algorithm Title

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1: Initialize each agent's  $Q$  network;  $(Q_1, Q_2)$ 
2: while Train Episode do
3:   Take action and queue the sample to each replay buffer
4:   Obtain random sample batch  $(s, a, r, s')$ 
5:   Calculate target  $Q$ 
6:   if With 0.1 probability then
7:      $y = r + Q_i(s', a')$  where  $a' = \arg \max(Q_j(s'))$ 
8:   else
9:      $y = r + Q(s', a')$  where  $a' = \arg \max(Q(s'))$ 
10:  end if
11:  Update each  $Q$  according to basic DQN update rule
12:     $Q \leftarrow Q + \alpha(\gamma y - Q)$ 
13: end while
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