

Reinforcement Learning Algorithm

SARSA or Deep Q Network · · · · · ·

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Algorithm 2: DQN implementation of two drones scenario
1: Initialization
2: for every episode j do
 s_1 \leftarrow random
   Algorithm 1: SARSA implementation of two drones scenario
      1: Initialization
       2: for every episode j do
            s_1 \leftarrow random
             for Every iteration t do
                for Every drone δ do
                  a_t \leftarrow \text{Choose action based on current Q Table } (Q_{s_t}, \epsilon_i, \delta)
                  s_{t+1} \leftarrow \text{ Take the previous action } (s_t, \alpha_t, \delta)
                  a_{t+1} \leftarrow \text{Choose action based on real scenario } (Q_{s_{t+1}}, \varepsilon_i, \delta)
                  r_t \leftarrow \text{ Compute the reward } (s_{t+1})
                  Q(s_t, a_t, d) \leftarrow Update Q Table
     10:
     11:
                  s_t \leftarrow s_{t+1}
                end for
            end for
     14: end for
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