

Algorithm template

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1 Demo code

Algorithm 1 DDQN Algorithm

```
1: mario env Initialization
2: while episode  $\leq$  episodes do                                ▶ episodes = 10000000
3:   env reset
4:   while True do                                                ▶ Play the game
5:     action  $\leftarrow$  mario.act(state)                            ▶ Run agent on the state
6:     nextstate, reward, done, trunc, info  $\leftarrow$  env.step(action)
7:     mario.cache(state, nextstate, action, reward, done)
8:     q, loss  $\leftarrow$  mario.learn                                ▶ learn with DDQN
9:     state  $\leftarrow$  nextstate                                    ▶ update state
```
