

Deep Reinforcement Learning has achieved a plenty of breakthroughs in the past decade. Motivated by these successes, many publications extend the most prosperous algorithms to multi-agent systems. In this work, we firstly build solid theoretical foundations of Multi-Agent Reinforcement Learning (MARL), along with unified notations. Thereafter, we give a brief review of the most influential algorithms for Single-Agent and Multi-Agent RL. Our attention is focused mainly on Actor-Critic architectures with centralized training and decentralized execution. We propose a new model architecture called MATD3-FORK, which is a combination of MATD3 and TD3-FORK. Finally, we provide thorough comparative experiments of these algorithms on various tasks with unified implementation.