Abstract

Reinforcement learning has its origin from the animal learning theory. RL does not require prior knowledge but can autonomously get optional policy with the help of knowledge obtained by trial-and-error and continuously interacting with the dynamic environment. Due to its characteristics of self improving and online learning, reinforcement learning has become one of intelligent agent's core technologies. This paper gives an introduction of reinforcement learning, discusses its basic model, the optimal policies used in RL, the main reinforcement optimal policy that are used to reward the agent including model free and model based policies – Temporal difference method, Q-learning, average reward, certainty equivalent methods, Dyna, prioritized sweeping, queue Dyna. At last but not the least this paper briefly describe the applications of reinforcement leaning and some of the future research scope in Reinforcement Learning.


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