

multiagent credit assignment in communism

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background

Many complex reinforcement learning problems, such as the coordination of autonomous vehicles, network packet delivery, distributed logistics is naturally modeled as a cooperative multi-agent system. However, the RL approach, designed as a single agent, usually performs poorly on such missions as the joint operations space agency grows exponentially with the number of agents.

In a collaborative environment, joint actions usually generate only a global return, making it hard for each agent to infer his own contribution to the team's success. Sometimes you can design individual rewards for each agency. However, these rewards are not commonplace in a collaborative environment and often do not encourage individual agents to sacrifice for greater benefit.

So credit assignment is a problem in multiagent environments

The superiority of communism

Due to the superiority of the doctrine, everyone helps me, I help everyone. There is no credit assignment problem in communism.