

一个刻画智能 Agent 理性信念的认知系统

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摘要: 在信念的类别上进行细化研究, 研究智能 Agent 在持有理性信念下的认知系统及其所具有的认知性质. 在理性信念的语义分析的基础上, 我们建立了一个有关智能 Agent 具有理性信念的推理系统, 并证明了该推理系统的可靠性及完全性. 通过该认知系统, 找到理性信念的形式化方法, 并且得出了理性信念既是智能 Agent 获取知识的必要条件. 该条件也是以往对知识定义所疏忽的限定条件, 同时还是智能 Agent 与生物认知主体在认知推理上相异的内因之一.

关键词: 理性信念; 主观概率; 认知推理; 人工智能

A Cognitive System about Intelligent Agent with Rational Belief

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Abstract: This paper mainly studies on the refining category of belief, and the cognitive properties about intelligent agent with rational belief. Based on the semantic analysis of the rational belief, we establish a cognitive inference system. After the proof of its soundness and completeness, we find rational belief is a necessary condition for intelligent agent to get knowledge, and also a limiting condition for knowledge definition. This condition is also a limiting condition for the definition of knowledge which was neglected in previous. What is more, it is one reason for the different between intelligent agent and biological cognitive agent in cognitive inference.

Key words: rational belief; subjective probability; cognitive inference; artificial intelligence

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