<<人工智能>>

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内容概要

《人工智能(一种现代的方法第3版影印版》(作者拉塞尔、诺维格)是最权威、最经典的人工智能教材，已被全世界100多个国家的1200多所大学用作教材。

《人工智能(一种现代的方法第3版影印版》的最新版全面而系统地介绍了人工智能的理论和实践，阐述了人工智能领域的核心内容，并深入介绍了各个主要的研究方向。
全书仍分为八大部分：第一部分“人工智能”，第二部分“问题求解”，第三部分“知识与推理”，第四部分“规划”，第五部分“不确定知识与推理”，第六部分“学习”，第七部分“通信、感知与行动”，第八部分“结论”。
《人工智能(一种现代的方法第3版影印版》既详细介绍了人工智能的基本概念、思想和算法，还描述了其各个研究方向最前沿的进展，同时收集整理了详实的历史文献与事件。
另外，《人工智能(一种现代的方法第3版影印版》的配套网址为教师和学生提供了大量教学和学习资料。

《人工智能(一种现代的方法第3版影印版》适合于不同层次和领域的研究人员及学生，是高等院校本科生和研究生人工智能课的首选教材，也是相关领域的科研与工程技术人员的重要参考书。

作者简介

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书籍目录

章节摘录

版权页：插图：The last component of the learning agent is the problem generator. It is responsible for suggesting actions that will lead to new and informative experiences. The point is that if the performance element had its way, it would keep doing the actions that are best, given what it knows. But if the agent is willing to explore a little and do some perhaps suboptimal actions in the short run, it might discover much better actions for the long run. The problem generator's job is to suggest these exploratory actions. This is what scientists do when they carry out experiments. Galileo did not think that dropping rocks from the top of a tower in Pisa was valuable in itself. He was not trying to break the rocks or to modify the brains of unfortunate passers-by. His aim was to modify his own brain by identifying a better theory of the motion of objects.To make the overall design more concrete, let us return to the automated taxi example. The performance element consists of whatever collection of knowledge and procedures the taxi has for selecting its driving actions. The taxi goes out on the road and drives, using this performance element. The critic observes the world and passes information along to the learning element. For example, after the taxi makes a quick left turn across three lanes of traffic, the critic observes the shocking language used by other drivers. From this experience, the learning element is able to formulate a rule saying this was a bad action, and the performance element is modified by installation of the new rule. The problem generator might identify certain areas of behavior in need of improvement and suggest experiments, such as trying out the brakes on different road surfaces under different conditions.The learning element can make changes to any of the "knowledge" components shown in the agent diagrams (Figures 2.9, 2.11, 2.13, and 2.14). The simplest cases involve learning directly from the percept sequence. Observation of pairs of successive states of the environment can allow the agent to learn "How the world evolves," and observation of the results of its actions can allow the agent to learn "What my actions do." For example, if the taxi exerts a certain braking pressure when driving on a wet road, then it will soon find out how much deceleration is actually achieved. Clearly, these two learning tasks are more difficult if the environment is only partially observable.

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