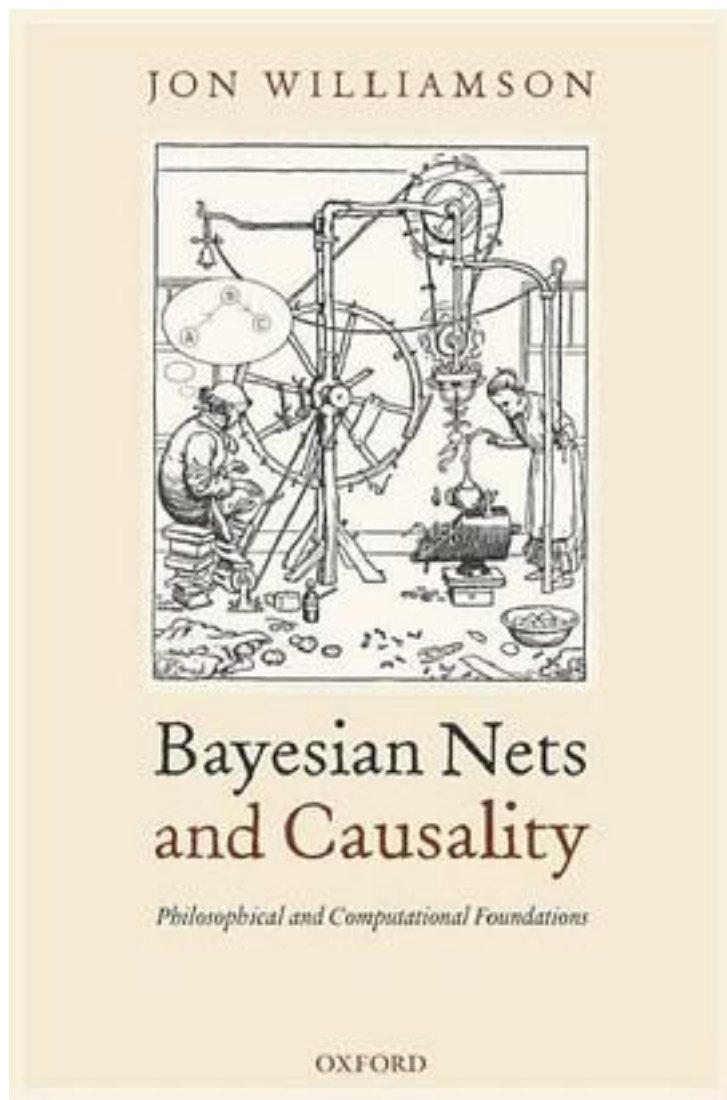


Bayesian Nets and Causality



[Bayesian Nets and Causality_ 下载链接1](#)

著者:Jon Williamson

出版者:OUP Oxford

出版时间:2004-12-23

装帧:Hardcover

isbn:9780198530794

Bayesian nets are widely used in artificial intelligence as a calculus for causal reasoning, enabling machines to make predictions, perform diagnoses, take decisions and even to discover causal relationships. But many philosophers have criticised and ultimately rejected the central assumption on which such work is based - the Causal Markov Condition. So should Bayesian nets be abandoned? What explains their success in artificial intelligence? This book argues that the Causal Markov Condition holds as a default rule: it often holds but may need to be repealed in the face of counterexamples. Thus Bayesian nets are the right tool to use by default but naively applying them can lead to problems. The book develops a systematic account of causal reasoning and shows how Bayesian nets can be coherently employed to automate the reasoning processes of an artificial agent. The resulting framework for causal reasoning involves not only new algorithms but also new conceptual foundations. Probability and causality are treated as mental notions - part of an agent's belief state. Yet probability and causality are also objective - different agents with the same background knowledge ought to adopt the same or similar probabilistic and causal beliefs. This book, aimed at researchers and graduate students in computer science, mathematics and philosophy, provides a general introduction to these philosophical views as well as an exposition of the computational techniques that they motivate.

作者介绍:

目录:

[Bayesian Nets and Causality_ 下载链接1](#)

标签

因果论

英國

英国

統計學

歐洲

概率論

數學

数学

评论

Salmon将因果性视为外在于意识的客观存在，而Jon在这里又重返Hume，将因果性视为一种心理状态（mental notion），以此为人工智能的automatic reasoning辩护……

[Bayesian Nets and Causality_ 下载链接1](#)

书评

[Bayesian Nets and Causality_ 下载链接1](#)