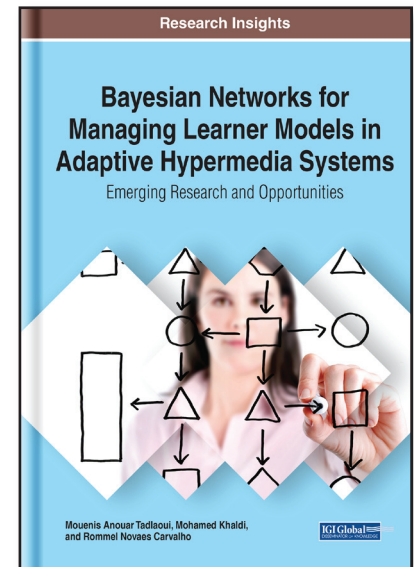# Bayesian Networks for Managing Learner Models in Adaptive Hypermedia Systems: Emerging Research and Opportunities

Part of the Advances in Educational Technologies and Instructional Design Book Series

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Description:

Teachers use e-learning systems to develop course notes and web-based activities to communicate with learners on one side and monitor and classify their progress on the other. Learners use it for learning, communication, and collaboration. Adaptive e-learning systems often employ learner models, and the behavior of an adaptive system varies depending on the data from the learner model and the learner's profile. Without knowing anything about the learner who uses the system, a system would behave in exactly the same way for all learners.

Bayesian Networks for Managing Learner Models in Adaptive Hypermedia Systems: Emerging Research and Opportunities is a collection of research on the use of Bayesian networks and methods as a probabilistic formalism for the management of the learner model in adaptive hypermedia. It specifically discusses comparative studies, transformation rules, and case diagrams that support all phases of the learner model and the use of Bayesian networks and multi-entity Bayesian networks to manage dynamic aspects of this model. While highlighting topics such as developing the learner model, learning management systems, and modeling techniques, this book is ideally designed for instructional designers, course administrators, educators, researchers, and professionals.

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Topics Covered:

- Adaptive E-Learning Systems
- Developing the Learner Model
- Domain-Specific Information Management
- Learning Management Systems
- Learning Styles
- Modeling Techniques
- Modern E-Learning
- Multi-Entity Bayesian Networks
- Stereotyping Method
- Teaching Adaptation

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