Granular Computing and Big Data Advancements

Part of the Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series
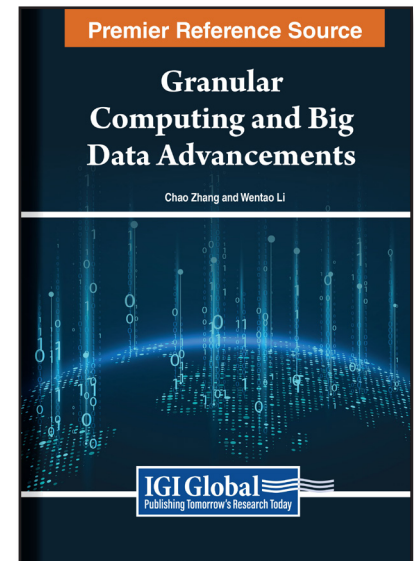
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Description:

In an era defined by the deluge of data, navigating the complexities of decision-making under conditions of uncertainty has emerged as a formidable challenge for scholars and practitioners alike. The sheer volume and velocity of information inundating decision-makers often leads to paralysis or misguided choices, amplifying the risks inherent in uncertain environments. **Granular Computing and Big Data Advancements** provides insights and solutions in this challenging landscape.

This comprehensive publication addresses the fundamental dilemma decision-makers face: how to harness the power of big data amidst uncertainty to make informed choices that drive success. By delving into the intricacies of big data analytics, uncertainty modeling, and advanced quantification techniques, the book equips scholars with the necessary tools to extract meaningful insights from vast datasets and confidently navigate uncertainty. Through real-world case studies spanning diverse domains such as finance, healthcare, and marketing, readers gain invaluable practical insights into applying these methodologies in their contexts.

The impact of **Granular Computing and Big Data Advancements** reverberates across the research community, offering a cohesive resource that bridges the gap between theory and practice. With its interdisciplinary approach and emphasis on innovation, the book fosters collaboration and empowers scholars to tackle complex challenges head-on. Whether researchers seek novel methodologies, practitioners aim to enhance decision-making processes, or students embark on their academic journey, this publication serves as a cornerstone in the quest for effective decision-making amidst the uncertainties of the modern world.

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Topics Covered:

- Bayesian Inference Graphical Models
- Customer Behavior Analysis
- Data Mining Algorithms for Big Data Analytics
- Decision Rules
- Decision Trees
- Emerging Trends in Big Data Analytics and Decision-Making
- Ethical and Societal Implications of Big Data-Driven Decision-Making
- Evolutionary Algorithms for Decision-Making
- Fairness and Bias in Decision-Making Algorithms
- Financial Decision-Making Under Uncertainty
- Foundations of Decision Theory
- Fuzzy Logic and Fuzzy Sets in Decision-Making
- Healthcare Analytics and Medical Decision Support Systems
- Leveraging Big Data for Decision-Making
- Linear Programming for Decision Optimization
- Machine Learning Algorithms for Big Data Analytics
- Metaheuristics for Decision-Making
- Nonlinear Programming for Decision Optimization
- Probabilistic Graphical Models
- Regulations Compliance

Subject: Computer Science & Information Technology

Classification: Edited Reference

Readership Level: Advanced-Academic Level (Research Recommended)

Research Suitable for: Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

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