

The Ethical Frontier of AI and Data Analysis

Part of the Advances in Computational Intelligence and Robotics Book Series

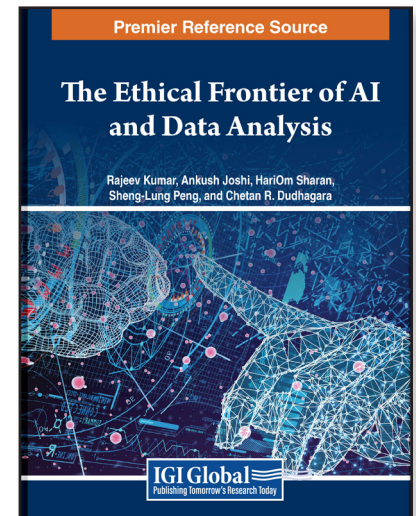
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Description:

In the advancing fields of artificial intelligence (AI) and data science, a pressing ethical dilemma arises. As technology continues its relentless march forward, ethical considerations within these domains become increasingly complex and critical. Bias in algorithms, lack of transparency, data privacy breaches, and the broader societal repercussions of AI applications are demanding urgent attention. This ethical quandary poses a formidable challenge for researchers, academics, and industry professionals alike, threatening the very foundation of responsible technological innovation.

Navigating this ethical minefield requires a comprehensive understanding of the multifaceted issues at hand. **The Ethical Frontier of AI and Data Analysis** is an indispensable resource crafted to address the ethical challenges that define the future of AI and data science. Researchers and academics who find themselves at the forefront of this challenge are grappling with the evolving landscape of AI and data science ethics. Underscoring the need for this book is the current lack of clarity on ethical frameworks, bias mitigation strategies, and the broader societal implications, which hinder progress and leave a void in the discourse. As the demand for responsible AI solutions intensifies, the imperative for this reliable guide that consolidates, explores, and advances the dialogue on ethical considerations grows exponentially.

Tailored for researchers, academics, and professionals, this publication serves as a beacon of ethical excellence. With a comprehensive exploration of bias, fairness, transparency, and accountability, it guides readers through the intricate web of ethical considerations. From foundational philosophical frameworks to real-world case studies, the book offers a roadmap to not only understand but actively shape the ethical trajectory of AI and data science. It is more than a book; it serves as a transformative tool for those seeking to align technological innovation with ethical standards and societal values.



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Topics Covered:

- Algorithmic Bias
- Autonomous Systems
- Bias and Fairness
- Building Ethical AI Teams
- Case Studies
- Data Ethics
- Data Privacy
- Discrimination
- Ethical Frameworks
- Explainable AI (XAI)
- Fairness Metrics
- General Data Protection Regulation
- Informed Consent
- Transparent AI

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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