1. Record Nr. UNINA9910983492303321

Autore	Schedl Markus
Titolo	Technical and Regulatory Perspectives on Information Retrieval and Recommender Systems : Fairness, Transparency, and Privacy / / by Markus Schedl, Vito Walter Anelli, Elisabeth Lex
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	3-031-69978-5
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (202 pages)
Collana	The Information Retrieval Series, , 2730-6836 ; ; 50
Altri autori (Persone)	AnelliVito Walter LexElisabeth
Disciplina	025.04
Soggetti	Information storage and retrieval systems Technology - Moral and ethical aspects Computers Computers and civilization Data protection - Law and legislation Information Storage and Retrieval Ethics of Technology Computing Milieux Computers and Society Privacy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Introduction -- 2. Regulatory Initiatives -- 3. Biases, Fairness, and Non-discrimination -- 4. Transparency -- 5. Privacy and Security -- 6. Conclusions and Open Challenges.
Sommario/riassunto	This book provides an in-depth treatment of three important topical areas related to regulatory, ethical, and technical discussions in the context of information retrieval and recommender systems (IRRSs): (1) bias, fairness, and non-discrimination, (2) transparency and explainability, and (3) privacy and security. Sometimes referred to as trustworthiness dimensions, they are analyzed by taking an interdisciplinary perspective and incorporating views from computer science, social sciences, psychology, and law and by particularly

considering the related technical challenges, societal impact, ethical considerations, and regulatory approaches. After an introduction, the book first provides an overview of recent initiatives and already operational policies to regulate AI technology and discusses them in the context of IRRSs, focusing on regulations in Europe, the US, and China. Subsequent chapters present categories of biases, their relation to fairness and non-discrimination and ways to discover and mitigate harmful biases; major facets of transparency, with a focus on explainability (including common strategies to achieve it), traceability, and auditability; and privacy and security including technical approaches to mitigate privacy risks such as anonymization techniques and encryption methods. Eventually, the last chapter provides an outlook on the grand challenges in IRRSs, such as dealing with discrepancies between formal attempts, human perception, and regulatory frameworks for trustworthy IRRSs; understanding the capabilities and limitations of existing solutions in terms of fairness, transparency, and privacy; and adopting a multistakeholder perspective when developing solutions for fair, transparent, and privacy-preserving IRRSs. The book targets a mostly technical readership and aims to equip it with the necessary understanding of the ethical implications of their research and development in IRRSs as well as of recent policy initiatives and regulatory approaches. While a basic knowledge of IRRSs is assumed to fully comprehend the more technical and algorithmic parts of the book, even a lay audience in terms of technical background should benefit from the book.