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Nota di contenuto	1. Introduction -- 2. Basics of Cryptography and Machine Learning -- 3. Privacy Models and Privacy Mechanisms -- 4. User's Privacy -- 5. Avoiding Disclosure from Computations -- 6. Avoiding Disclosure from Data Masking Methods -- 7. Other -- 8. Conclusions.
Sommario/riassunto	Data privacy technologies are essential for implementing information systems with privacy by design. Privacy technologies clearly are needed for ensuring that data does not lead to disclosure, but also that statistics or even data-driven machine learning models do not lead to disclosure. For example, can a deep-learning model be attacked to

discover that sensitive data has been used for its training? This accessible textbook presents privacy models, computational definitions of privacy, and methods to implement them. Additionally, the book explains and gives plentiful examples of how to implement—among other models—differential privacy, k-anonymity, and secure multiparty computation. Topics and features: Provides integrated presentation of data privacy (including tools from statistical disclosure control, privacy-preserving data mining, and privacy for communications) Discusses privacy requirements and tools for different types of scenarios, including privacy for data, for computations, and for users Offers characterization of privacy models, comparing their differences, advantages, and disadvantages Describes some of the most relevant algorithms to implement privacy models Includes examples of data protection mechanisms This unique textbook/guide contains numerous examples and succinctly and comprehensively gathers the relevant information. As such, it will be eminently suitable for undergraduate and graduate students interested in data privacy, as well as professionals wanting a concise overview. Vicenç Torra is Professor with the Department of Computing Science at Umeå University, Umeå, Sweden.
