

Navigating Big Data S Privacy And Security Challenges

Big data, analytics, and artificial intelligence are revolutionizing work, management, and lifestyles and are becoming disruptive technologies for healthcare, e-commerce, and web services. However, many fundamental, technological, and managerial issues for developing and applying intelligent big data analytics in these fields have yet to be addressed. Managerial Perspectives on Intelligent Big Data Analytics is a collection of innovative research that discusses the integration and application of artificial intelligence, business intelligence, digital transformation, and intelligent big data analytics from a perspective of computing, service, and management. While highlighting topics including e-commerce, machine learning, and fuzzy logic, this book is ideally designed for students, government officials, data scientists, managers, consultants, analysts, IT specialists, academicians, researchers, and industry professionals in fields that include big data, artificial intelligence, computing, and commerce.

In recent years, technological advances have led to significant developments within a variety of business applications. In particular, data-driven research provides ample opportunity for enterprise growth, if utilized efficiently. Privacy and Security Policies in Big Data is a pivotal reference source for the latest research on innovative concepts on the management of security and privacy analytics within big data. Featuring extensive coverage on relevant areas such as kinetic knowledge, cognitive analytics, and parallel computing, this publication is an ideal resource for professionals, researchers, academicians, advanced-level students, and technology developers in the field of big data.

Multidisciplinary research is steadily revolutionizing traditional education, scientific approaches, and activities related to security matters. Therefore, the knowledge generated through multidisciplinary research into the field of application of scientific inquiry could be utilized to protect critical and vital assets of a country. The field of security requires focus on the assessment and resolution of complex systems. Consequently, the dynamics of the intelligence field leads to the necessity of raising awareness and placing priority on improved ideas using scientific inquiry. Intelligence and Law Enforcement in the 21st Century provides personnel directly working in the fields of intelligence and law enforcement with an opportunity to deeply delve into the challenges, choices, and complications in finding, applying, and presenting the gathered intelligence through various methods and then presenting them through available policies and procedures in the arena of law and order. The book also addresses how law enforcement is critically assessed in the 21st century when implementing the rule of law and order. Covering topics such as counterterrorism, cybersecurity, biological and chemical weapons, and scientific inquiry, this is an essential text for law enforcement, intelligence specialists, analysts, cybersecurity professionals, government officials, students, teachers, professors, practitioners, and researchers in fields that include terrorism and national security.

This book focuses on new and emerging data mining solutions that offer a greater level of transparency than existing solutions. Transparent data mining solutions with desirable properties (e.g. effective, fully automatic, scalable) are covered in the book. Experimental findings of transparent solutions are tailored to different domain experts, and experimental metrics for evaluating algorithmic transparency are presented. The book also discusses societal effects of black box vs. transparent approaches to data mining, as well as real-world use cases for these approaches. As algorithms increasingly support different aspects of modern life, a greater level of transparency is sorely needed, not least because discrimination and biases have to be avoided. With contributions from domain experts, this book provides an overview of an emerging area of data mining that has profound societal consequences, and provides the technical background to for readers to contribute to the field or to put existing approaches to practical use.

This collection explores the relevance of global trade law for data, big data and cross-border data flows. Contributing authors from different disciplines including law, economics and political science analyze developments at the World Trade Organization and in preferential trade venues by asking what future-oriented models for data governance are available and viable in the area of trade law and policy. The collection paints the broad picture of the interaction between digital technologies and trade regulation as well as provides in-depth analyses of critical to the data-driven economy issues, such as privacy and AI, and different countries' perspectives. This title is also available as Open Access on Cambridge Core.

This book is open access under a CC BY 4.0 license. This book sheds new light on a selection of big data scenarios from an interdisciplinary perspective. It features legal, sociological and economic approaches to fundamental big data topics such as privacy, data quality and the ECJ's Safe Harbor decision on the one hand, and practical applications such as smart cars, wearables and web tracking on the other. Addressing the interests of researchers and practitioners alike, it provides a comprehensive overview of and introduction to the emerging challenges regarding big data. All contributions are based on papers submitted in connection with ABIDA (Assessing Big Data), an interdisciplinary research project exploring the societal aspects of big data and funded by the German Federal Ministry of Education and Research. This volume was produced as a part of the ABIDA project (Assessing Big Data, 01IS15016A-F). ABIDA is a four-year collaborative project funded by the Federal Ministry of Education and Research. However the views and opinions expressed in this book reflect only the authors' point of view and not necessarily those of all members of the ABIDA project or the Federal Ministry of Education and Research.

Massive amounts of data on human beings can now be analyzed. Pragmatic purposes abound, including selling goods and services, winning political campaigns, and identifying possible terrorists. Yet 'big data' can also be harnessed to serve the public good: scientists can use big data to do research that improves the lives of human beings, improves government services, and reduces taxpayer costs. In order to achieve this goal, researchers must have access to this data - raising important privacy questions. What are the

ethical and legal requirements? What are the rules of engagement? What are the best ways to provide access while also protecting confidentiality? Are there reasonable mechanisms to compensate citizens for privacy loss? The goal of this book is to answer some of these questions. The book's authors paint an intellectual landscape that includes legal, economic, and statistical frameworks. The authors also identify new practical approaches that simultaneously maximize the utility of data access while minimizing information risk.

"Earth observation & navigation. Law and technology" jest publikacją wydaną przez Wydawnictwo Ius Publicum przy współpracy z Institute of Intellectual Property. Książka została wydana pod redakcją naukową dr Marleny Jankowskiej (Uniwersytet Śląski w Katowicach) oraz Profesora Mirosława Pawełczyka (Uniwersytet Śląski w Katowicach, Prezes Fundacji Ius Publicum), a także Profesora Sławomira Augustyn (Wojskowa Akademia Techniczna) i Doktora Marcina Kulawiaka (Politechnika Gdańska). Książka dotyczy tematyki obserwacji Ziemi i nawigacji. Zagadnienia te zostały omówione zarówno od strony technicznej, jak i prawnej. Redaktorzy oraz autorzy książki wyszli z założenia, że dla zrozumienia tej problematyki konieczną jest zwrócenie naukowej uwagi na obie sfery obserwacji Ziemi i nawigacji.

With the immense amount of data that is now available online, security concerns have been an issue from the start, and have grown as new technologies are increasingly integrated in data collection, storage, and transmission. Online cyber threats, cyber terrorism, hacking, and other cybercrimes have begun to take advantage of this information that can be easily accessed if not properly handled. New privacy and security measures have been developed to address this cause for concern and have become an essential area of research within the past few years and into the foreseeable future. The ways in which data is secured and privatized should be discussed in terms of the technologies being used, the methods and models for security that have been developed, and the ways in which risks can be detected, analyzed, and mitigated. The Research Anthology on Privatizing and Securing Data reveals the latest tools and technologies for privatizing and securing data across different technologies and industries. It takes a deeper dive into both risk detection and mitigation, including an analysis of cybercrimes and cyber threats, along with a sharper focus on the technologies and methods being actively implemented and utilized to secure data online. Highlighted topics include information governance and privacy, cybersecurity, data protection, challenges in big data, security threats, and more. This book is essential for data analysts, cybersecurity professionals, data scientists, security analysts, IT specialists, practitioners, researchers, academicians, and students interested in the latest trends and technologies for privatizing and securing data.

When data from all aspects of our lives can be relevant to our health - from our habits at the grocery store and our Google searches to our FitBit data and our medical records - can we really differentiate between big data and health big data? Will health big data be used for good, such as to improve drug safety, or ill, as in insurance discrimination? Will it disrupt health care (and the health care system) as we know it? Will it be possible to protect our health privacy? What barriers will there be to collecting and utilizing health big data? What role should law play, and what ethical concerns may arise? This timely, groundbreaking volume explores these questions and more from a variety of perspectives, examining how law promotes or discourages the use of big data in the health care sphere, and also what we can learn from other sectors.

Today, cloud computing, big data, and the internet of things (IoT) are becoming indubitable parts of modern information and communication systems. They cover not only information and communication technology but also all types of systems in society including within the realms of business, finance, industry, manufacturing, and management. Therefore, it is critical to remain up-to-date on the latest advancements and applications, as well as current issues and challenges. The Handbook of Research on Cloud Computing and Big Data Applications in IoT is a pivotal reference source that provides relevant theoretical frameworks and the latest empirical research findings on principles, challenges, and applications of cloud computing, big data, and IoT. While highlighting topics such as fog computing, language interaction, and scheduling algorithms, this publication is ideally designed for software developers, computer engineers, scientists, professionals, academicians, researchers, and students.

Privacy, Big Data, and the Public Good
Frameworks for Engagement
Cambridge University Press

With the proliferation of devices connected to the internet and connected to each other, the volume of data collected, stored, and processed is increasing every day, which brings new challenges in terms of information security. As big data expands with the help of public clouds, traditional security solutions tailored to private computing infrastructures and confined to a well-defined security perimeter, such as firewalls and demilitarized zones (DMZs), are no longer effective. New security functions are required to work over the heterogeneous composition of diverse hardware, operating systems, and network domains. Security, Privacy, and Forensics Issues in Big Data is an essential research book that examines recent advancements in big data and the impact that these advancements have on information security and privacy measures needed for these networks. Highlighting a range of topics including cryptography, data analytics, and threat detection, this is an excellent reference source for students, software developers and engineers, security analysts, IT consultants, academicians, researchers, and professionals.

After a short description of the key concepts of big data the book explores on the secrecy and security threats posed especially by cloud based data storage. It delivers conceptual frameworks and models along with case studies of recent technology.

The changes brought about by digital technology and the consequent explosion of information known as Big Data have brought opportunities and challenges in all areas of society, and the law is no exception. This book, Knowledge of the Law in the Big Data Age contains a selection of the papers presented at the conference 'Law via the Internet 2018', held in Florence, Italy, on 11-12 October 2018. This annual conference of the 'Free Access to Law Movement' (<http://www.fatlm.org>) hosted more than 60 international speakers from universities, government and research bodies as well as EU institutions. Topics covered range from free access to law and Big Data and data analytics in the legal domain, to policy issues concerning access, publishing and the dissemination of legal information, tools to support democratic participation and opportunities for digital democracy. The book is divided into 3 sections: Part I provides an introductory background, covering aspects such as the evolution of legal science and models for representing the law; Part II addresses the present and future of access to law and to various legal information sources; and Part III covers updates in projects, initiatives, and concrete achievements in the field. The book provides an overview of the practical implementation of legal information systems and the tools to manage this special kind of information, as well as some of the critical issues which must be faced, and will be of interest to all those working at the intersection of law and technology.

Because efficient compilation of information allows managers and business leaders to make the best decisions for the financial solvency of their organizations, data analysis is an important part of modern business administration. Understanding the use of analytics, reporting, and data mining in everyday business environments is imperative to the success of modern businesses. Utilizing Big Data Paradigms for Business Intelligence is a pivotal reference source that provides vital research on how to address the challenges of data extraction in business intelligence using the five "Vs" of big data: velocity, volume,

value, variety, and veracity. This book is ideally designed for business analysts, investors, corporate managers, entrepreneurs, and researchers in the fields of computer science, data science, and business intelligence.

Technology in the world today impacts every aspect of society and has infiltrated every industry, affecting communication, management, security, etc. With the emergence of such technologies as IoT, big data, cloud computing, AI, and virtual reality, organizations have had to adjust the way they conduct business to account for changing consumer behaviors and increasing data protection awareness. The Handbook of Research on Social and Organizational Dynamics in the Digital Era provides relevant theoretical frameworks and the latest empirical research findings on all aspects of social issues impacted by information technology in organizations and inter-organizational structures and presents the conceptualization of specific social issues and their associated constructs. Featuring coverage on a broad range of topics such as business management, knowledge management, and consumer behavior, this publication seeks to advance the practice and understanding of technology and the impacts of technology on social behaviors and norms in the workplace and society. It is intended for business professionals, executives, IT practitioners, policymakers, students, and researchers.

An Economist Book of the Year Every minute of every day, our data is harvested and exploited... It is time to pull the plug on the surveillance economy. Governments and hundreds of corporations are spying on you, and everyone you know. They're not just selling your data. They're selling the power to influence you and decide for you. Even when you've explicitly asked them not to. Reclaiming privacy is the only way we can regain control of our lives and our societies. These governments and corporations have too much power, and their power stems from us--from our data. Privacy is as collective as it is personal, and it's time to take back control. Privacy Is Power tells you how to do exactly that. It calls for the end of the data economy and proposes concrete measures to bring that end about, offering practical solutions, both for policymakers and ordinary citizens.

Location, location-awareness, and location data have all become familiar and increasingly significant parts of our everyday mobile-mediated experiences. Cultural Economies of Locative Media examines the ways in which location-based services, such as GPS-enabled mobile smartphones, are socially, culturally, economically, and politically produced just as much as they are technically designed and manufactured. Rowan Wilken explores the complex interrelationships that mutually define new business models and the economic factors that emerge around, and structure, locative media services. Further, he offers readers insight into the diverse social uses, cultures of consumption, and policy implications of location, providing a detailed, critical account of contemporary location-sensitive mobile data. Cultural Economies of Locative Media delves into the ideas, technologies, contexts, and power relationships that define this scholarship, resulting in a rich portrait of locative media in all of its cultural and economic complexity.

A revelatory exploration of the hottest trend in technology and the dramatic impact it will have on the economy, science, and society at large. Which paint color is most likely to tell you that a used car is in good shape? How can officials identify the most dangerous New York City manholes before they explode? And how did Google searches predict the spread of the H1N1 flu outbreak? The key to answering these questions, and many more, is big data. "Big data" refers to our burgeoning ability to crunch vast collections of information, analyze it instantly, and draw sometimes profoundly surprising conclusions from it. This emerging science can translate myriad phenomena—from the price of airline tickets to the text of millions of books—into searchable form, and uses our increasing computing power to unearth epiphanies that we never could have seen before. A revolution on par with the Internet or perhaps even the printing press, big data will change the way we think about business, health, politics, education, and innovation in the years to come. It also poses fresh threats, from the inevitable end of privacy as we know it to the prospect of being penalized for things we haven't even done yet, based on big data's ability to predict our future behavior. In this brilliantly clear, often surprising work, two leading experts explain what big data is, how it will change our lives, and what we can do to protect ourselves from its hazards. Big Data is the first big book about the next big thing. www.big-data-book.com

Big data has always been a major challenge in geoinformatics as geospatial data come in various types and formats, new geospatial data are acquired very fast, and geospatial databases are inherently very large. And while there have been advances in hardware and software for handling big data, they often fall short of handling geospatial big data. Winner of two Outstanding Book Awards from the Association of Educational Communications and Technology (Culture, Learning, & Technology and Systems Thinking & Change divisions)! Rapid advancements in our ability to collect, process, and analyze massive amounts of data along with the widespread use of online and blended learning platforms have enabled educators at all levels to gain new insights into how people learn. Responsible Analytics and Data Mining in Education addresses the thoughtful and purposeful navigation, evaluation, and implementation of these emerging forms of educational data analysis. Chapter authors from around the world explore how data analytics can be used to improve course and program quality; how the data and its interpretations may inadvertently impact students, faculty, and institutions; the quality and reliability of data, as well as the accuracy of data-based decisions; ethical implications surrounding the collection, distribution, and use of student-generated data; and more. This volume unpacks and explores this complex issue through a systematic framework whose dimensions address the issues that must be considered before implementation of a new initiative or program.

Natural disasters and cholera outbreaks. Ebola, SARS, and concerns over pandemic flu. HIV and AIDS. E. coli outbreaks from contaminated produce and fast foods. Threats of bioterrorism. Contamination of compounded drugs. Vaccination refusals and outbreaks of preventable diseases. These are just some of the headlines from the last 30-plus years highlighting the essential roles and responsibilities of public health, all of which come with ethical issues and the responsibilities they create. Public health has achieved extraordinary successes. And yet these successes also bring with them ethical tension. Not all public health successes are equally distributed in the population; extraordinary

health disparities between rich and poor still exist. The most successful public health programs sometimes rely on policies that, while improving public health conditions, also limit individual rights. Public health practitioners and policymakers face these and other questions of ethics routinely in their work, and they must navigate their sometimes competing responsibilities to the health of the public with other important societal values such as privacy, autonomy, and prevailing cultural norms. This Oxford Handbook provides a sweeping and comprehensive review of the current state of public health ethics, addressing these and numerous other questions. Taking account of the wide range of topics under the umbrella of public health and the ethical issues raised by them, this volume is organized into fifteen sections. It begins with two sections that discuss the conceptual foundations, ethical tensions, and ethical frameworks of and for public health and how public health does its work. The thirteen sections that follow examine the application of public health ethics considerations and approaches across a broad range of public health topics. While chapters are organized into topical sections, each chapter is designed to serve as a standalone contribution. The book includes 73 chapters covering many topics from varying perspectives, a recognition of the diversity of the issues that define public health ethics in the U.S. and globally. This Handbook is an authoritative and indispensable guide to the state of public health ethics today.

Outdoor wayfinding and navigation systems and services have become indispensable in people's mobility in unfamiliar environments. Advances in key technologies (e.g., positioning and mobile devices), has spurred interest in research and development of indoor wayfinding and navigation systems and services in recent years. Indoor Wayfinding and Navigation provides both breadth and depth of knowledge in designing and building indoor wayfinding and navigation systems and services. It covers the types of sensors both feasible and practical for localization of users inside buildings. The book discusses current approaches, techniques, and technologies for addressing issues in indoor wayfinding and navigation systems and services. It includes coverage of the cognitive, positioning, mapping, and application perspectives, an unusual but useful combination of information. This mix of different perspectives helps you better understand the issues and challenges of building indoor wayfinding and navigation systems and services, how they are different from those used outdoors, and how they can be used efficiently and effectively in challenging applications. Written by well-known specialists in the field, the book addresses all aspects of indoor wayfinding and navigation. It includes the latest research developments on the topic, succinctly covers the fundamentals, and details the issues and challenges in building new systems and services. With this information, you can design indoor wayfinding and navigation systems and services for a variety of uses and users.

Though the exact nature and delineation of Big Data is still unclear, it seems likely that Big Data will have an enormous impact on our daily lives. 'Exploring the Boundaries of Big Data' serves as preparatory work for The Netherlands Scientific Council for Government Policy's advice to the Dutch government, which has asked the Council to address questions regarding Big Data, security and privacy. It is divided into five parts, each part engaging with a different perspective on Big Data: the technical, empirical, legal, regulatory and international perspective.

The role of big finance and technology in social change is rapidly evolving. This book examines why large financial players are entering the social sector through social finance. Drawing on empirical research, the authors analyse the opportunities this new interest and commitment presents as well as the potential harm that can be done to vulnerable people when beneficiaries are not treated as partners and the social needs of people are not placed at the centre of the investment model. This book introduces a 'Deliberate Leadership' framework to help big finance tackle problems with no easy solutions. The book also analyses how current technologies (including blockchain) are being used and the benefits and drawbacks of different features of these technologies from the standpoint of the beneficiary and investor. The authors derive a series of insights into the model of technology for social finance and impact investing. Written as a practical book for students alongside a field book based on an action learning methodology, this volume will be useful to those in social finance and impact investing.

Geographical and Fingerprinting Data for Positioning and Navigation Systems: Challenges, Experiences and Technology Roadmap explores the state-of-the-art software tools and innovative strategies to provide better understanding of positioning and navigation in indoor environments using fingerprinting techniques. The book provides the different problems and challenges of indoor positioning and navigation services and shows how fingerprinting can be used to address such necessities. This advanced publication provides the useful references educational institutions, industry, academic researchers, professionals, developers and practitioners need to apply, evaluate and reproduce this book's contributions. The readers will learn how to apply the necessary infrastructure to provide fingerprinting services and scalable environments to deal with fingerprint data. Provides the current state of fingerprinting for indoor positioning and navigation, along with its challenges and achievements Presents solutions for using WIFI signals to position and navigate in indoor environments Covers solutions for using the magnetic field to position and navigate in indoor environments Contains solutions of a modular positioning system as a solution for seamless positioning Analyzes geographical and fingerprint data in order to provide indoor/outdoor location and navigation systems

The book includes new theory, original empirical evidence, and applied case studies synthesizing advances in innovation and technology for the retail sector. Chapters identify the challenges retailers face in response to new practices, suggesting how the sector can respond to technological developments, ethical considerations and privacy issues.

Find the right big data solution for your business or organization Big data management is one of the major challenges facing business, industry, and not-for-profit organizations. Data sets such as customer transactions for a mega-retailer, weather patterns monitored by meteorologists, or social network activity can quickly outpace the capacity of traditional data management tools. If you need to develop or manage big data solutions, you'll appreciate how these four experts define, explain, and guide you through this new and often confusing concept. You'll learn what it is, why it matters, and how to choose and implement solutions that work. Effectively managing big data is an issue of growing importance to businesses, not-for-profit organizations, government, and IT professionals Authors are experts in information management, big data, and a variety of solutions Explains big data in detail and discusses how to select and implement a solution, security concerns to consider, data storage and presentation issues, analytics, and much more Provides essential information in a no-nonsense, easy-to-understand style that is empowering Big Data For Dummies cuts through the confusion and helps you take charge of big data solutions for your organization.

Smart Cities Cybersecurity and Privacy examines the latest research developments and their outcomes for safe, secure, and trusting smart cities residents. Smart cities improve the quality of life of citizens in their energy and water usage, healthcare, environmental impact, transportation needs, and many other critical city services. Recent advances in hardware and software, have fueled the rapid growth and deployment of ubiquitous connectivity between a city's physical and cyber components. This connectivity however also opens up many security vulnerabilities that must be mitigated. Smart Cities Cybersecurity and Privacy helps researchers, engineers, and city planners develop adaptive, robust, scalable, and reliable security and privacy smart city applications that can mitigate the negative implications associated with cyber-attacks and potential privacy invasion. It provides insights into networking and security architectures, designs, and models for the secure operation of smart city applications. Consolidates in one place state-of-the-art academic and industry research Provides a holistic and systematic framework for design, evaluating, and deploying the latest security solutions for smart cities Improves understanding and collaboration among all smart city stakeholders to develop more secure smart city architectures

An examination of corporate privacy management in the United States, Germany, Spain, France, and the United Kingdom, identifying international best practices and making policy recommendations. Barely a week goes by without a new privacy revelation or scandal. Whether by hackers or spy agencies or social networks, violations of our personal information have shaken entire industries, corroded relations among nations, and bred distrust between democratic governments and their citizens. Polls reflect this concern, and show majorities for more, broader, and stricter regulation—to put more laws “on the books.” But there was scant evidence of how well tighter regulation actually worked “on the ground” in changing corporate (or government) behavior—until now. This intensive five-nation study goes inside corporations to examine how the people charged with protecting privacy actually do their work, and what kinds of regulation effectively shape their behavior. And the research yields a surprising result. The countries with more ambiguous regulation—Germany and the United States—had the strongest corporate privacy management practices, despite very different cultural and legal environments. The more rule-bound countries—like France and Spain—trended instead toward compliance processes, not embedded privacy practices. At a crucial time, when Big Data and the Internet of Things are snowballing, Privacy on the Ground helpfully searches out the best practices by corporations, provides guidance to policymakers, and offers important lessons for everyone concerned with privacy, now and in the future.

Since the first censuses were taken and crop yields recorded in ancient times, data collection and analysis have been essential to improving the functioning of society. Foundational work in calculus, probability theory, and statistics in the 17th and 18th centuries provided an array of new tools used by scientists to more precisely predict the movements of the sun and stars and determine population-wide rates of crime, marriage, and suicide. These tools often led to stunning advances. In the 1800s, Dr. John Snow used early modern data science to map cholera “clusters” in London. By tracing to a contaminated public well a disease that was widely thought to be caused by “miasmatic” air, Snow helped lay the foundation for the germ theory of disease. Gleaning insights from data to boost economic activity also took hold in American industry. Frederick Winslow Taylor's use of a stopwatch and a clipboard to analyze productivity at Midvale Steel Works in Pennsylvania increased output on the shop floor and fueled his belief that data science could revolutionize every aspect of life.² In 1911, Taylor wrote *The Principles of Scientific Management* to answer President Theodore Roosevelt's call for increasing “national efficiency”: Today, data is more deeply woven into the fabric of our lives than ever before. We aspire to use data to solve problems, improve well-being, and generate economic prosperity. The collection, storage, and analysis of data is on an upward and seemingly unbounded trajectory, fueled by increases in processing power, the cratering costs of computation and storage, and the growing number of sensor technologies embedded in devices of all kinds. In 2011, some estimated the amount of information created and replicated would surpass 1.8 zettabytes. In 2013, estimates reached 4 zettabytes of data generated worldwide.

Big Data and Smart Service Systems presents the theories and applications regarding Big Data and smart service systems, data acquisition, smart cities, business decision-making support, and smart service design. The rapid development of computer and Internet technologies has led the world to the era of Big Data. Big Data technologies are widely used, which has brought unprecedented impacts on traditional industries and lifestyle. More and more governments, business sectors, and institutions begin to realize data is becoming the most valuable asset and its analysis is becoming the core competitiveness.

Describes the frontier of service science and motivates a discussion among readers on a multidisciplinary subject areas that explores the design of smart service Illustrates the concepts, framework, and application of big data and smart service systems Demonstrates the crucial role of smart service to promote the transformation of the regional and global economy

Firms are collecting and analyzing customer data at an ever increasing rate in response to evidence that data analytics (precision targeting, improved selling) generates a positive return. Yet efforts often ignore customers' privacy concerns and feelings of vulnerability with long-term effects on customers' trust, relationships, and ultimately financial performance. Big data, privacy, and cybersecurity often is relegated to IT and legal teams with minimal regard for customer relationships. This book fills the void by taking a customer-centric approach to privacy. It offers both defensive and offensive marketing-based privacy strategies that strongly position firms in today's data-intensive landscape. The book also helps managers anticipate future consumer and legislative trends. Drawing from the authors' own work and extant research, this book offers a compelling guide for building and implementing big data- and privacy-informed business strategies. Specifically, the book:

- Describes the consumer psychology of privacy
- Deconstructs relevant legal and regulatory issues
- Offers defensive privacy strategies
- Describes offensive privacy strategies
- Provides an executive summary with the Six Tenets for Effective Privacy Marketing

This book will be useful to managers, students, or the casual reader who is interested in how and why big data and consumer privacy are transforming business. Moving beyond summary privacy insights, the book also offers a detailed and compelling action plan for improving performance by protecting against privacy threats as well as developing and implementing offensive privacy strategy. In the future, many firms will be competing through an integrated, customer-centric big data privacy strategy and this book will guide managers in this journey.

Digital data collection and surveillance is pervasive and no one can protect your privacy without your help. Before you can help yourself, you need to understand the new technologies, what benefits they provide, and what trade-offs they require. Some of those trade-offs – privacy for convenience – could be softened by our own behavior or be reduced by legislation if we fight for it. This book analyzes why privacy is important to all of us, and it describes the technologies that place your privacy most at risk, starting with modern computing and the Internet.

This book constitutes extended, revised and selected papers from the 22nd International Conference on Enterprise Information Systems, ICEIS 2020, held online during May 5-7, 2020. The 41 papers presented in this volume were carefully reviewed and selected for inclusion in this book from a total of 255 submissions. They were organized in topical sections as follows: database and information systems integration; artificial intelligence and decision support systems; information systems analysis and specification; software agents and internet computing; human-computer interaction; and enterprise architecture.

This handbook brings together a variety of approaches to the uses of big data in multiple fields, primarily science, medicine, and business. This single resource features contributions from researchers around the world from a variety of fields, where they share their findings and experience. This book is intended to help spur further innovation in big data. The research is presented in a way that allows readers, regardless of their field of study, to learn from how applications have proven successful and how similar applications could be used in their own field. Contributions stem from researchers in fields such as physics, biology, energy, healthcare, and business. The contributors also discuss important topics such as fraud detection, privacy implications, legal perspectives, and ethical handling of big data. Provides a roadmap for understanding the relationship between technology and human rights law and practice. This title is also available as Open Access.

Big Data and Social Science: Data Science Methods and Tools for Research and Practice, Second Edition shows how to apply data science to real-world problems, covering all stages of a data-intensive social science or policy project. Prominent leaders in the social sciences, statistics, and computer science as well as the field of data science provide a unique perspective on how to apply modern social science research principles and current analytical and computational tools. The text teaches you how to identify and collect appropriate data, apply data science methods and tools to the data, and recognize and respond to data errors, biases, and limitations. Features Takes an accessible, hands-on approach to handling new types of data in the social sciences Presents the key data science tools in a non-intimidating way to both social and data scientists while keeping the focus on research questions and purposes Illustrates social science and data science principles through real-world problems Links computer science concepts to practical social science research Promotes good scientific practice Provides freely available data and code as well as practical programming exercises through Binder and GitHub New to the Second Edition Increased use of examples from different areas of social sciences New chapter on dealing with Bias and Fairness in Machine Learning models Expanded chapters focusing on Machine Learning and Text Analysis Revamped hands-on Jupyter notebooks to reinforce concepts covered in each chapter This classroom-tested book fills a major gap in graduate- and professional-level data science and social science education. It can be used to train a new generation of social data scientists to tackle real-world problems and improve the skills and competencies of applied social scientists and public policy practitioners. It empowers you to use the massive and rapidly growing amounts of available data to interpret economic and social activities in a scientific and rigorous manner.

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