

Navigating Big Data S Privacy And Security Challenges

As recognized, adventure as well as experience approximately lesson, amusement, as competently as settlement can be gotten by just checking out a ebook **Navigating Big Data S Privacy And Security Challenges** moreover it is not directly done, you could acknowledge even more approximately this life, in relation to the world.

We meet the expense of you this proper as without difficulty as simple artifice to acquire those all. We present Navigating Big Data S Privacy And Security Challenges and numerous books collections from fictions to scientific research in any way. in the course of them is this Navigating Big Data S Privacy And Security Challenges that can be your partner.

EARTH OBSERVATION & NAVIGATION. LAW AND TECHNOLOGY - Marlena Jankowska
2017-12-01

"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 Pawęcznyka (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, jaki i prawnej.

Redaktorzy oraz autorzy książki wyszli z założenia, że dla zrozumienia tej problemami koniecznej jest zwrócenie naukowej uwagi na obie sfery obserwacji Ziemi i nawigacji.

Health Informatics and Patient Safety in Times of Crisis - Vajjhala, Narasimha Rao 2022-12-09

The COVID-19 pandemic has highlighted the importance of health data, technology, and access to health

informatics. The applications of several information technologies in the context of healthcare are proving instrumental in pandemic control. These technologies were already actively used in the healthcare sector before the pandemic. However, the pandemic has resulted in researchers reassessing how these technologies could have better assisted with the aftermath of the COVID-19 pandemic and how they may mitigate the threat of future pandemics. Health Informatics and Patient Safety in Times of Crisis provides a fresh perspective on how healthcare informatics has managed the current pandemic and how improved healthcare informatics could help in a future crisis. Covering topics such as digital public health, misinformation, and knowledge management, this premier reference source is an indispensable resource for medical professionals, hospital administrators, public health officials, community leaders, international leaders, libraries, medical students, medical professors, researchers, and academicians.
pHealth 2020 - B. Blobel 2020-09-30
Smart mobile systems such as

microsystems, smart textiles, smart implants, and sensor-controlled medical devices, together with their related networks, have become important enablers for telemedicine and ubiquitous pervasive health to become next-generation health services. This book presents the proceedings of pHealth 2020, held as a virtual conference from 14 – 16 September 2020. This is the 17th in a series of international conferences on wearable or implantable micro and nano technologies for personalized medicine, which bring together expertise from medical, technological, political, administrative, and social domains, and cover subjects including technological and biomedical facilities, legal, ethical, social, and organizational requirements and impacts, and the research necessary to enable future-proof care paradigms. The 2020 conference also covers AI and robots in healthcare; bio-data management and analytics for personalized health; security, privacy and safety challenges; integrated care; and the intelligent management of specific diseases including the Covid-19 pandemic. Communication and cooperation with national and regional health authorities and the challenges facing health systems in developing countries were also addressed. The book includes 1 keynote, 5 invited talks, 25 oral presentations, and 8 short poster presentations from 99 international authors. All submissions were carefully and critically reviewed by at least two independent experts and at least one member of the Scientific Program Committee; a highly selective review process resulting in a full-paper rejection rate of 36%. The book will be of interest to all those involved in the design and provision of healthcare and also to patients and

citizen representatives.

The Future of Drone Use - Bart Custers 2016-10-15

Given the popularity of drones and the fact that they are easy and cheap to buy, it is generally expected that the ubiquity of drones will significantly increase within the next few years. This raises questions as to what is technologically feasible (now and in the future), what is acceptable from an ethical point of view and what is allowed from a legal point of view. Drone technology is to some extent already available and to some extent still in development. The aim and scope of this book is to map the opportunities and threats associated with the use of drones and to discuss the ethical and legal issues of the use of drones. This book provides an overview of current drone technologies and applications and of what to expect in the next few years. The question of how to regulate the use of drones in the future is addressed, by considering conditions and contents of future drone legislation and by analyzing issues surrounding privacy and safeguards that can be taken. As such, this book is valuable to scholars in several disciplines, such as law, ethics, sociology, politics and public administration, as well as to practitioners and others who may be confronted with the use of drones in their work, such as professionals working in the military, law enforcement, disaster management and infrastructure management. Individuals and businesses with a specific interest in drone use may also find in the nineteen contributions contained in this volume unexpected perspectives on this new field of research and innovation. Bart Custers is Associate Professor and Head of Research at eLaw, the Center for Law and Digital

Technologies at Leiden University, The Netherlands. He has presented his work at international conferences in the United States, China, Japan, the Middle East and throughout Europe and has published over 80 scientific, professional and popularizing publications, including three books.

Smart Cities Cybersecurity and Privacy - Danda B. Rawat 2018-12-04

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

Managerial Perspectives on

Intelligent Big Data Analytics - Sun, Zhaohao 2019-02-22

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.

Intelligence and Law Enforcement in the 21st Century - de Silva, Eugene 2021-06-25

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.

Cybersecurity Education for Awareness and Compliance - Vasileiou, Ismini
2019-02-22

Understanding cybersecurity principles and practices is vital to all users of IT systems and services, and is particularly relevant in an organizational setting where the lack of security awareness and compliance amongst staff is the root cause of many incidents and breaches. If these are to be addressed, there needs to be adequate support and provision for related training and education in order to ensure that staff know what is expected of them and have the necessary skills to follow through. *Cybersecurity Education for Awareness and Compliance* explores frameworks and models for teaching cybersecurity literacy in order to deliver

effective training and compliance to organizational staff so that they have a clear understanding of what security education is, the elements required to achieve it, and the means by which to link it to the wider goal of good security behavior. Split across four thematic sections (considering the needs of users, organizations, academia, and the profession, respectively), the chapters will collectively identify and address the multiple perspectives from which action is required. This book is ideally designed for IT consultants and specialist staff including chief information security officers, managers, trainers, and organizations.

Autonomous Real-Time Testing - Thomas Michael Fehlmann 2020-01-17

Software testing is becoming increasingly important because more and more products are software-intensive. Cars, for example, contain more and more control software (ECUs) that are networked with each other. With new rail vehicles, software problems delay commissioning by months, even years, because the different components are not coordinated with each other. A timely system test would help, but there is a lack of time and resources. The functionality of the software is simply too great. So, you must automate. Automation is not only necessary for the execution of tests, but above all for the generation of suitable test cases. This is possible with Combinatory Logic, the Analytic Hierarchy Process (AHP), and Quality Function Deployment (QFD). When today's cars use map services from the cloud, or their own sensors, for an Advanced Driving Assistance System (ADAS) to perform driving decisions; or when in the future an autonomous car meets another; or with truck platooning; or when adding a new, previously unknown device to an IoT

orchestra, the original base system expands its functionality. Therefore, such an expanding system needs being retested before it can do decisions with the potential of affecting harm to humans or things, after each update, after each learning. This is Continuous Testing during operation; it supplements Continuous Delivery and Continuous Integration.

Disruptive innovations in automotive require an equally disruptive new approach to testing of software-intensive systems. This requires moving from once-upon-a-time testing before release to autonomous real-time software & systems testing during operations, with indications to users and suppliers about the actual state and testing results. This book explains the theory and the implementation approach for a framework for Autonomous Real-time Testing (ART) of a software-intensive system while in operation.

Privacy-Preserving Data Publishing - Bee-Chung Chen 2009-10-14

This book is dedicated to those who have something to hide. It is a book about "privacy preserving data publishing" -- the art of publishing sensitive personal data, collected from a group of individuals, in a form that does not violate their privacy. This problem has numerous and diverse areas of application, including releasing Census data, search logs, medical records, and interactions on a social network. The purpose of this book is to provide a detailed overview of the current state of the art as well as open challenges, focusing particular attention on four key themes: RIGOROUS PRIVACY POLICIES Repeated and highly-publicized attacks on published data have demonstrated that simplistic approaches to data publishing do not work. Significant recent advances have exposed the shortcomings of naive (and not-so-

naive) techniques. They have also led to the development of mathematically rigorous definitions of privacy that publishing techniques must satisfy; METRICS FOR DATA UTILITY While it is necessary to enforce stringent privacy policies, it is equally important to ensure that the published version of the data is useful for its intended purpose. The authors provide an overview of diverse approaches to measuring data utility; ENFORCEMENT MECHANISMS This book describes in detail various key data publishing mechanisms that guarantee privacy and utility; EMERGING APPLICATIONS The problem of privacy-preserving data publishing arises in diverse application domains with unique privacy and utility requirements. The authors elaborate on the merits and limitations of existing solutions, based on which we expect to see many advances in years to come.

Geographic Information Systems in Geospatial Intelligence - Rustam B. Rustamov 2020

Earth observation systems, by use of space science and technology advances, present a large-scale opportunity for applying remote sensing methods with geographical information system (GIS) developments. Integrating these two methods makes it possible to achieve high-accuracy satellite data processing. This book considers aspects of GIS technology applications with space science technology and innovation approaches. It examines the potential of Earth observation satellite systems as well as existing challenges and problems in the field. Chapters cover topics such as RGB-D sensors for autonomous pothole detection, machine learning in GIS, interferometric synthetic aperture radar (InSAR) modeling, and others.

Cultural Economies of Locative Media

- Rowan Wilken 2019-10-09

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.

Enterprise Information Systems -

Joaquim Filipe 2021-04-30

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.

Privacy-Enhancing Fog Computing and Its Applications - Xiaodong Lin
2018-11-12

This SpringerBrief covers the security and privacy challenges in fog computing, and proposes a new secure and privacy-preserving mechanisms to resolve these challenges for securing fog-assisted IoT applications. Chapter 1 introduces the architecture of fog-assisted IoT applications and the security and privacy challenges in fog computing. Chapter 2 reviews several promising privacy-enhancing techniques and illustrates examples on how to leverage these techniques to enhance the privacy of users in fog computing. Specifically, the authors divide the existing privacy-enhancing techniques into three categories: identity-hidden techniques, location privacy protection and data privacy enhancing techniques. The research is of great importance since security and privacy problems faced by fog computing impede the healthy development of its enabled IoT applications. With the advanced privacy-enhancing techniques, the authors propose three secure and privacy-preserving protocols for fog computing applications, including smart parking navigation, mobile crowdsensing and smart grid. Chapter 3 introduces identity privacy leakage in smart parking navigation systems, and proposes a privacy-preserving smart parking navigation system to prevent identity privacy exposure and support efficient parking guidance retrieval through road-side units (fogs) with high retrieving probability and security guarantees. Chapter 4 presents the location privacy leakage, during task allocation in mobile crowdsensing, and propose a strong privacy-preserving task allocation scheme that enables location-based task allocation and

reputation-based report selection without exposing knowledge about the location and reputation for participators in mobile crowdsensing. Chapter 5 introduces the data privacy leakage in smart grid, and proposes an efficient and privacy-preserving smart metering protocol to allow collectors (fogs) to achieve real-time measurement collection with privacy-enhanced data aggregation. Finally, conclusions and future research directions are given in Chapter 6. This brief validates the significant feature extension and efficiency improvement of IoT devices without sacrificing the security and privacy of users against dishonest fog nodes. It also provides valuable insights on the security and privacy protection for fog-enabled IoT applications. Researchers and professionals who carry out research on security and privacy in wireless communication will want to purchase this SpringerBrief. Also, advanced level students, whose main research area is mobile network security will also be interested in this SpringerBrief.

Utilizing Big Data Paradigms for Business Intelligence - Darmont, Jérôme 2018-08-10

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.

Indoor Wayfinding and Navigation - Hassan A. Karimi 2015-03-25

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.

Navigating Big Finance and Big Technology for Global Change - Gayle Peterson 2020-10-27

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.

Handbook of Research on Driving Socioeconomic Development With Big Data - Sun, Zhaohao 2023-02-24

Socioeconomic development has drawn increasing attention in academia, industries, and governments. The relationship between big data and its technologies and socioeconomic development has drawn certain attention in academia. Socioeconomic development depends not only on big data, but also on big data

technologies. However, the relationship between big data and socioeconomic development is not adequately covered in current research. The Handbook of Research on Driving Socioeconomic Development With Big Data provides an original and innovative understanding of and insight into how the proposed theories, technologies, and methodologies of big data can improve socioeconomic development and sustainable development in terms of business and services, healthcare, the internet of everything, sharing economy, and more. Covering topics such as corporate social responsibility, management applications, and process mining, this major reference work is an excellent resource for data scientists, business leaders and executives, IT professionals, government officials, economists, sociologists, librarians, students, researchers, and academicians.

HCI Challenges and Privacy Preservation in Big Data Security - Lopez, Daphne 2017-08-10

Privacy protection within large databases can be a challenge. By examining the current problems and challenges this domain is facing, more efficient strategies can be established to safeguard personal information against invasive pressures. *HCI Challenges and Privacy Preservation in Big Data Security* is an informative scholarly publication that discusses how human-computer interaction impacts privacy and security in almost all sectors of modern life. Featuring relevant topics such as large scale security data, threat detection, big data encryption, and identity management, this reference source is ideal for academicians, researchers, advanced-level students, and engineers that are interested in staying current on the advancements and drawbacks of

human-computer interaction within the world of big data.

Smart Grid in IoT-Enabled Spaces - Fadi Al-Turjman 2020-10-05

Internet of Things (IoT)-enabled spaces have made revolutionary advances in the utility grid. Among these advances, intelligent and energy-efficient services are gaining considerable interest. The use of the smart grid is increasing day after day around us and is not only used in saving energy but also in our daily life for intelligent health, traffic, and even farming systems. The grid enabled with IoT features is also expected to communicate with cellular networks smoothly in the next-generation networks (6G and beyond). This will open the door for other interesting research areas. In this book, we consider the most significant and emergent research topics in this domain, addressing major issues and challenges in IoT-based solutions proposed for the smart grid. The chapters provide insight on comprehensive topics in IoT-based smart grids, combining technical aspects with the most up-to-date theory. It investigates the grid under varying and potential emerging paradigms such as edge/fog computing, in addition to big data aspects considerations in the IoT era. With comprehensive surveys and case studies, this book explores basic and high-level grid aspects in the emerging smart city paradigm, which makes it especially attractive to researchers, academics, and higher-level students. This authored book can be used by computer science undergraduate and postgraduate students, researchers and practitioners, city administrators, policymakers, and government regulators.

Privacy and Security Policies in Big Data - Tamane, Sharvari 2017-03-03

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.

Data Science and Internet of Things - Giancarlo Fortino 2021-02-18

This book focuses on the combination of IoT and data science, in particular how methods, algorithms, and tools from data science can effectively support IoT. The authors show how data science methodologies, techniques and tools, can translate data into information, enabling the effectiveness and usefulness of new services offered by IoT stakeholders. The authors posit that if IoT is indeed the infrastructure of the future, data structure is the key that can lead to a significant improvement of human life. The book aims to present innovative IoT applications as well as ongoing research that exploit modern data science approaches. Readers are offered issues and challenges in a cross-disciplinary scenario that involves both IoT and data science fields. The book features contributions from academics, researchers, and professionals from both fields.

Big Data and Security - Yuan Tian 2022-03-09

This book constitutes the refereed

proceedings of the Third International Conference on Big Data and Security, ICBDS 2021, held in Shenzhen, China, in November 2021. The 46 revised full papers and 13 short papers were carefully reviewed and selected out of 221 submissions. The papers included in this volume are organized according to the topical sections on cybersecurity and privacy; big data; blockchain and internet of things, and artificial intelligence/ machine learning security.

Security and Organization within IoT and Smart Cities - Kayhan Zrar Ghafoor 2020-12-17

This book aims to provide the latest research developments and results in the domain of AI techniques for smart cyber ecosystems. It presents a holistic insight into AI-enabled theoretic approaches and methodology in IoT networking, security analytics using AI tools, and network automation, which ultimately enable intelligent cyber space. This book will be a valuable resource for students, researchers, engineers, policy makers working in various areas related to cybersecurity and privacy for Smart cities. This book includes chapters titled "An Overview of the Artificial Intelligence Evolution and its Fundamental Concepts, and their relationship with IoT Security", "Smart City: Evolution and fundamental concepts", "Advances in AI-Based Security for Internet of Things in Wireless Virtualization Environment", "A conceptual model for optimal resource sharing of networked microgrids focusing uncertainty – paving path to eco-friendly smart cities", "A Novel Framework for Cyber Secure Smart City", "Contemplate Security Challenges & Threats for Smart Cities", "Self-Monitoring Obfuscated IoT Network", "Introduction to Side Channel Attacks and Investigation of Power Analysis &

Fault Injection Attack Techniques", "Collaborative Digital Forensic Investigations Model for Law Enforcement: Oman as a Case Study", "Internet of Things Security and Privacy in Smart Cities: Status and Challenges", "5G Security and the Internet of Things", "The Problem of Deepfake Videos and How to Counteract Them in Smart Cities", "The Rise of Ransomware aided by Vulnerable IoT devices", and "Security Issues in Self-Driving Cars within Smart Cities", "PhishFree: A Honeybee Inspired System for Smart City Free of Phishing Attacks", "Trust Aware Crowd Associated Network-based Approach for Optimal Waste Management in Smart Cities" This book provides state-of-the-art of research results and discusses current issues, challenges, solutions and recent trends related to security and organization within IoT and Smart Cities. We expect this book to be of significant importance not only to researchers and practitioners in academia, government agencies and industries, but also for policy makers and system managers. We anticipate this book to be a valuable resource for all those working in this new and exciting area, and a "must have" for all university libraries.

Data Science and Human-Environment Systems - Steven M. Manson 2023-01-31
Transformation of the Earth's social and ecological systems is occurring at a rate and magnitude unparalleled in human experience. Data science is a revolutionary new way to understand human-environment relationships at the heart of pressing challenges like climate change and sustainable development. However, data science faces serious shortcomings when it comes to human-environment research. There are challenges with social and environmental data, the methods that manipulate and analyze the

information, and the theory underlying the data science itself; as well as significant legal, ethical and policy concerns. This timely book offers a comprehensive, balanced, and accessible account of the promise and problems of this work in terms of data, methods, theory, and policy. It demonstrates the need for data scientists to work with human-environment scholars to tackle pressing real-world problems, making it ideal for researchers and graduate students in Earth and environmental science, data science and the environmental social sciences.

Internet of Things and Big Data Analytics Toward Next-Generation Intelligence - Nilanjan Dey

2017-08-14

This book highlights state-of-the-art research on big data and the Internet of Things (IoT), along with related areas to ensure efficient and Internet-compatible IoT systems. It not only discusses big data security and privacy challenges, but also energy-efficient approaches to improving virtual machine placement in cloud computing environments. Big data and the Internet of Things (IoT) are ultimately two sides of the same coin, yet extracting, analyzing and managing IoT data poses a serious challenge. Accordingly, proper analytics infrastructures/platforms should be used to analyze IoT data. Information technology (IT) allows people to upload, retrieve, store and collect information, which ultimately forms big data. The use of big data analytics has grown tremendously in just the past few years. At the same time, the IoT has entered the public consciousness, sparking people's imaginations as to what a fully connected world can offer. Further, the book discusses the analysis of real-time big data to derive actionable intelligence in enterprise applications in several domains, such

as in industry and agriculture. It explores possible automated solutions in daily life, including structures for smart cities and automated home systems based on IoT technology, as well as health care systems that manage large amounts of data (big data) to improve clinical decisions. The book addresses the security and privacy of the IoT and big data technologies, while also revealing the impact of IoT technologies on several scenarios in smart cities design. Intended as a comprehensive introduction, it offers in-depth analysis and provides scientists, engineers and professionals the latest techniques, frameworks and strategies used in IoT and big data technologies.

Marine Navigation and Safety of Sea Transportation - Adam Weintrit

2013-06-04

The TransNav 2013 Symposium held at the Gdynia Maritime University, Poland in June 2013 has brought together a wide range of participants from all over the world. The program has offered a variety of contributions, allowing to look at many aspects of the navigational safety from various different points of view. Topics presented and discussed at the Symposium were: navigation, safety at sea, sea transportation, education of navigators and simulator-based training, sea traffic engineering, ship's manoeuvrability, integrated systems, electronic charts systems, satellite, radio-navigation and anti-collision systems and many others. This book is part of a series of four volumes and provides an overview of advances in Marine Navigation and is addressed to scientists and professionals involved in research and development of navigation, safety of navigation and sea transportation. **Digital Transformation in Policing: The Promise, Perils and Solutions** -

Reza Montasari 2023-01-02

This book shares essential insights into how the social sciences and technology could foster new advances in managing the complexity inherent to the criminal and digital policing landscape. Said landscape is both dynamic and intricate, emanating as it does from crimes that are both persistent and transnational. Globalization, human and drug trafficking, cybercrime, terrorism, and other forms of transnational crime can have significant impacts on societies around the world. This necessitates a reassessment of what crime, national security and policing mean. Recent global events such as human and drug trafficking, the COVID-19 pandemic, violent protests, cyber threats and terrorist activities underscore the vulnerabilities of our current security and digital policing posture. This book presents concepts, theories and digital policing applications, offering a comprehensive analysis of current and emerging trends in digital policing. Pursuing an evidence-based approach, it offers an extraordinarily perceptive and detailed view of issues and solutions regarding the crime and digital policing landscape. To this end, it highlights current technological and methodological solutions as well as advances concerning integrated computational and analytical solutions deployed in digital policing. It also provides a comprehensive analysis of the technical, ethical, legal, privacy and civil liberty challenges stemming from the aforementioned advances in the field of digital policing; and accordingly, offers detailed recommendations supporting the design and implementation of best practices including technical, ethical and legal approaches when conducting digital policing. The research

gathered here fits well into the larger body of work on various aspects of AI, cybersecurity, national security, digital forensics, cyberterrorism, ethics, human rights, cybercrime and law. It provides a valuable reference for law enforcement, policymakers, cybersecurity experts, digital forensic practitioners, researchers, graduates and advanced undergraduates, and other stakeholders with an interest in counter-terrorism. In addition to this target audience, it offers a valuable tool for lawyers, criminologist and technology enthusiasts.

Privacy - Michael Filimowicz
2022-02-24

Privacy: Algorithms and Society focuses on encryption technologies and privacy debates in journalistic crypto-cultures, countersurveillance technologies, digital advertising, and cellular location data. Important questions are raised such as: How much information will we be allowed to keep private through the use of encryption on our computational devices? What rights do we have to secure and personalized channels of communication, and how should those be balanced by the state's interests in maintaining order and degrading the capacity of criminals and rival state actors to organize through data channels? What new regimes may be required for states to conduct digital searches, and how does encryption act as countersurveillance? How have key debates relied on racialized social constructions in their discourse? What transformations in journalistic media and practices have occurred with the development of encryption tools? How are the digital footprints of consumers tracked and targeted? Scholars and students from many backgrounds as well as policy makers,

journalists, and the general reading public will find a multidisciplinary approach to questions of privacy and encryption encompassing research from Communication, Sociology, Critical Data Studies, and Advertising and Public Relations.

Transparent Data Mining for Big and Small Data - Tania Cerquitelli

2017-05-09

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.

Privacy, Big Data, and the Public

Good - Julia Lane 2014-06-09

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.

Privacy in the Age of Big Data -

Theresa Payton 2014-01-16

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.

Information Systems and Technologies

- Alvaro Rocha 2022-05-10

This book covers the following main topics: A) information and knowledge management; B) organizational models and information systems; C) software and systems modeling; D) software systems, architectures, applications and tools; E) multimedia systems and applications; F) computer networks,

mobility and pervasive systems; G) intelligent and decision support systems; H) big data analytics and applications; I) human-computer interaction; J) ethics, computers and security; K) health informatics; L) information technologies in education; M) information technologies in radio communications; N) technologies for biomedical applications. This book is composed by a selection of articles from The 2022 World Conference on Information Systems and Technologies (WorldCIST'22), held between April 12 and 14, in Budva, Montenegro.

WorldCIST is a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences, and challenges of modern information systems and technologies research, together with their technological development and applications.

Big Data Intelligence for Smart Applications - Youssef Baddi
2022-01-18

Today, the use of machine intelligence, expert systems, and analytical technologies combined with Big Data is the natural evolution of both disciplines. As a result, there is a pressing need for new and innovative algorithms to help us find effective and practical solutions for smart applications such as smart cities, IoT, healthcare, and cybersecurity. This book presents the latest advances in big data intelligence for smart applications. It explores several problems and their solutions regarding computational intelligence and big data for smart applications. It also discusses new models, practical solutions, and technological advances related to developing and transforming cities through machine intelligence and big data models and techniques. This book is helpful for

students and researchers as well as practitioners.

Social Information Access - Peter Brusilovsky
2018-05-02

Social information access is defined as a stream of research that explores methods for organizing the past interactions of users in a community in order to provide future users with better access to information. Social information access covers a wide range of different technologies and strategies that operate on a different scale, which can range from a small closed corpus site to the whole Web. The 16 chapters included in this book provide a broad overview of modern research on social information access. In order to provide a balanced coverage, these chapters are organized by the main types of information access (i.e., social search, social navigation, and recommendation) and main sources of social information.

The Cloud in IoT-enabled Spaces - Fadi Al-Turjman
2019-07-31

The Cloud in IoT-enabled Spaces addresses major issues and challenges in IoT-based solutions proposed for the Cloud. It paves the way for IoT-enabled spaces in the next generation cloud computing paradigm and opens the door for further innovative ideas. Topics include Cloud-based optimization in the IoT era, scheduling and routing, medium access, data caching, secure access, uncertainty, home automation, machine learning in wearable devices, energy monitoring, and plant phenotyping in farming. Smart spaces are solutions where Internet of Things (IoT)-enabling technologies have been employed towards further advances in the lifestyle. It tightly integrates with the existing Cloud infrastructure to impact several fields in academia and industry. The Cloud in IoT-enabled Spaces provides an overview of the issues around

small spaces and proposes the most up-to-date alternatives and solutions. The objective is to pave the way for IoT-enabled spaces in the next-generation Cloud computing and open the door for further innovative ideas.

Security and Privacy in Communication Networks - Xiaodong Lin 2018-04-24

This book constitutes the refereed proceedings of two workshops held at the 13th International Conference on Security and Privacy in Communications Networks, SecureComm 2017, held in Niagara Falls, ON, Canada, in October 2017: the 5th International Workshop on Applications and Techniques in Cyber Security, ATCS 2017, and the First Workshop on Security and Privacy in the Internet Of Things, SePrIoT 2017. The 22 revised regular papers were carefully reviewed and selected from 105 submissions. The topics range from access control; language-based security; malicious software; network security; cloud security; software security; operating system security; privacy protection, database security, security models; and many more. The SePrIoT workshop targets to address novel approaches in security and privacy. The papers focus, amongst others, on novel models, techniques, protocols, algorithms, or architectures.

Geographical and Fingerprinting Data for Positioning and Navigation Systems - Jordi Conesa 2018-10-06

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
Seeing Cities Through Big Data - Piyushimita (Vonu) Thakuriah 2016-10-07

This book introduces the latest thinking on the use of Big Data in the context of urban systems, including research and insights on human behavior, urban dynamics, resource use, sustainability and spatial disparities, where it promises improved planning, management and governance in the urban sectors (e.g., transportation, energy, smart cities, crime, housing, urban and regional economies, public health, public engagement, urban governance and political systems), as well as Big Data's utility in decision-making, and development of indicators to monitor economic and social activity, and for urban sustainability, transparency, livability, social inclusion, place-

making, accessibility and resilience.
**Proceeding of the International
Conference on Computer Networks, Big
Data and IoT (ICCBI - 2018) -**

A.Pasumpon Pandian 2019-07-31

This book presents the proceedings of the International Conference on Computer Networks, Big Data and IoT (ICCBI-2018), held on December 19–20, 2018 in Madurai, India. In recent years, advances in information and communication technologies [ICT] have collectively aimed to streamline the evolution of internet applications. In this context, increasing the ubiquity of emerging internet applications with an enhanced capability to communicate in a distributed environment has become a major need for existing networking models and applications. To achieve this, Internet of Things [IoT] models have been developed to facilitate a smart interconnection and information

exchange among modern objects – which plays an essential role in every aspect of our lives. Due to their pervasive nature, computer networks and IoT can easily connect and engage effectively with their network users. This vast network continuously generates data from heterogeneous devices, creating a need to utilize big data, which provides new and unprecedented opportunities to process these huge volumes of data. This International Conference on Computer Networks, Big Data, and Internet of Things [ICCBI] brings together state-of-the-art research work, which briefly describes advanced IoT applications in the era of big data. As such, it offers valuable insights for researchers and scientists involved in developing next-generation, big-data-driven IoT applications to address the real-world challenges in building a smartly connected environment.