Smart Surveillance Monitoring System Using Raspberry Pi

This book presents the proceedings of the 6th International Conference on Frontier Computing, held in Kuala Lumpur, Malaysia on July 3–6, 2018, and provides comprehensive coverage of the latest advances and trends in information technology, science and engineering. It addresses a number of broad themes, including communication networks, business intelligence and knowledge management, web intelligence, and related fields that inspire the development of information technology. The contributions cover a wide range of topics: database and data mining, networking and communications, web and internet of things, embedded systems, soft computing, social network analysis, security and privacy, optical communication, and ubiquitous/pervasive computing. Many of the papers outline promising future research directions. The book is a valuable resource for students, researchers and professionals, and also offers a useful reference guide for newcomers to the field.

The bright future of green IoT will change our tomorrow environment to become healthier and green, with very high quality of service that is socially, environmentally, and economically sustainable. This book covers the most recent advances in IoT, it discusses Smart City implementation, and offers both quantitative and qualitative research. It focuses on greening things such as green communication and networking, green design and implementations, green IoT services and applications, energy saving strategies, integrated RFIDs and sensor networks, mobility and network management, the cooperation of homogeneous and heterogeneous networks, smart objects, and green localization. This book with its wide range of related topics in IoT and Smart City, will be useful for graduate students, researchers, academicians, institutions, and professionals that are interested in exploring the areas of IoT and Smart City.

With near-universal internet access and ever-advancing electronic devices, the ability to facilitate interactions between various hardware and software provides endless possibilities. Though internet of things (IoT) technology is becoming more popular among individual users and companies, more potential applications of this technology are being sought every day. There is a need for studies and reviews that discuss the methodologies, concepts, and possible problems of a technology that requires little or no human interaction between systems. The Handbook of Research on the Internet of Things Applications in Robotics and Automation is a pivotal reference source on the methods and uses of advancing IoT technology. While highlighting topics including traffic information systems, home security, and automatic parking, this book is ideally designed for network analysts, telecommunication system designers, engineers, academicians, technology specialists, practitioners, researchers, students, and software developers seeking current research on the trends and functions of this life-changing technology.

IoT Enabling Technologies IoT Services and Applications IoT and Computing IoT and Data Science IoT Security and Privacy IoT and Smart City

Internet of Things for Indoor Air Quality Monitoring

Select Proceedings of ICNETS2, Volume II

Technologies, Design, and Applications

Proceedings of ICSCS 2021

7th International Conference, MCSS 2014, Krakow, Poland, June 11-12, 2014. Proceedings

Green Internet of Things for Smart Cities

This e-book is a compilation of papers presented at the 6th Mechanical Engineering Research Day (MERD'19) - Kampus Teknologi UTeM, Melaka, Malaysia on 31 July 2019.

Advances in computing, communications, and control have bridged the physical components of reality and cyberspace leading to the smart internet of things (IoT). The notion of IoT has extraordinary significance for the future of several industrial domains. Hence, it is expected that the complexity in the design of IoT applications will continue to increase due to the integration of several cyber components with physical and industrial systems. As a result, several smart protocols and algorithms are needed to communicate and exchange data between IoT devices. Smart Devices, Applications, and Protocols for the IoT is a collection of innovative research that explores new methods and techniques for achieving reliable and efficient communication in recent applications including machine learning, network optimization, adaptive methods, and smart algorithms and protocols. While highlighting topics including artificial intelligence, sensor networks, and mobile network architectures, this book is ideally designed for IT specialists and consultants, software engineers, technology developers, academicians, researchers, and students seeking current research on up-to-date technologies in smart communications, protocols, and algorithms in IoT.

As innovators continue to explore and create new developments within the fields of artificial intelligence and computer science, subfields such as machine learning and the internet of things (IoT) have emerged. Now, the internet of everything (IoE), foreseen as a cohesive and intelligent connection of people, processes, data, and things, is theorized to make internet connections more valuable by converting information into wise actions that create unprecedented capabilities, richer experiences, and economic opportunities to all players in the market. Harnessing the Internet of Everything (IoE) for Accelerated Innovation Opportunities discusses the theoretical, design, evaluation, implementation, and use of innovative technologies within the fields of IoE, machine learning, and IoT. Featuring research on topics such as low-power electronics, mobile technology, and artificial intelligence, this book is ideally designed for computer engineers, software developers, investigators, advanced-level students, professors, and professionals seeking coverage on the various contemporary theories, technologies, and tools in IoE engineering.

This book provides a synthesis for using IoT for indoor air quality assessment. It will help upcoming researchers to understand the gaps in the literature while identifying the new challenges and opportunities to develop healthy living spaces. On the other hand, this book provides insights about integrating IoT with artificial intelligence to design smart buildings with enhanced air quality. Consequently, this book aims to present future scope for carrying out potential research activities in this domain. Over the past few years, the Internet of Things (IoT) is proven as the most revolutionizing invention in the field of engineering and design. This technology has wide scope in automation and real-time monitoring. Indoor air quality assessment is one of the most important applications of IoT which helps in the development of smart and healthy living spaces. Numerous methods have been developed for air quality assessment to ensure enhanced public health and well-being. The combination of sensors, microcontrollers, and communication technologies can be used to handle the massive amount of field data to access the condition of building air quality.

Intelligent Communication, Control and Devices

Proceedings of Mechanical Engineering Research Day 2019

Sharing My Knowledge

Smart Systems: Innovations in Computing

Concepts, Implications, and Challenges

Mapping Political, Social and Economic Risks and Threats

With the recent growth of big data and the internet of things (IoT), individuals can now upload, retrieve, store, and collect massive amounts of information to help drive decisions and optimize processes. Due to this, a new age of predictive computing is taking place, and data can now be harnessed to predict unknown occurrences or probabilities based on data collected in real time. Predictive Intelligence Using Big Data and the Internet of Things highlights state-of-the-art research on predictive intelligence using big data, the IoT, and related areas to ensure quality assurance and compatible IoT systems. Featuring coverage on predictive application scenarios to discuss these breakthroughs in real-world settings and various methods, frameworks, algorithms, and security concerns for predictive intelligence, this book is ideally designed for academicians, researchers, advanced-level students, and technology developers.

This volume constitutes the refereed proceedings of the 7th International Conference on Multimedia Communications, Services and Security, MCSS 2014, held in Krakow, Poland, in June 2014. The 21 full papers included in the volume were selected from numerous submissions. The papers cover ongoing research activities in the following topics: audiovisual systems, novel multimedia architectures, multimedia data fusion, acquisition of multimedia content, quality of experience management, watermarking technology and applications, content searching methods, interactive multimedia applications, cybercrime countermeasures, cryptography, biometry, as well as privacy protection solutions.

This book features a collection of high-quality, peer-reviewed papers presented at the Second International Conference on Ubiquitous Intelligent Systems (ICUIS 2022) organized by Shree Venkateshwara Hi-Tech Engineering College, Tamil Nadu, India, during March 10–11, 2022. The book covers topics such as cloud computing, mobile computing and networks, embedded computing frameworks, modeling and analysis of ubiquitous information systems, communication networking models, big data models and applications, ubiquitous information processing systems, next-generation ubiquitous networks and protocols, advanced intelligent systems, Internet of Things, wireless communication and storage networks, intelligent information retrieval techniques, AI-based intelligent information visualization techniques, cognitive informatics, smart automation systems, health care informatics and bioinformatics models, security and privacy of intelligent information systems, and smart distributed information systems.

This book explains IoT technology, its potential applications, the security and privacy aspects, the key necessities like governance, risk management, regulatory compliance needs, the philosophical aspects of this technology that are necessary to support an ethical, safe and secure digitally enhanced environment in which people can live smarter. It describes the inherent technology of IoT, the architectural components and the philosophy behind this emerging technology. Then it shows the various potential applications of the Internet of Things that can bring benefits to the human society. Finally, it discusses various necessities to provide a secured and trustworthy IoT service.

My Sharing Knowledge

Frontier Computing

ICT Systems and Sustainability

IoT-enabled Smart Healthcare Systems, Services and Applications

Data Science and Security

2021 8th International Conference on Smart Computing and Communications (ICSCC)

With the evolution of technology and sudden growth in the number of smart vehicles, traditional Vehicular Ad hoc NETworks (VANETs) face several technical challenges in deployment and management due to less flexibility, scalability, poor connectivity, and inadequate intelligence. VANETs have raised increasing attention from both academic research and industrial aspects resulting from their important role in driving assistant system. Vehicular Ad Hoc Networks focuses on recent advanced technologies and applications that address network protocol design, low latency networking, context-aware interaction, energy efficiency, resource management, security, human-robot interaction, assistive technology and robots, application development, and integration of multiple systems that support Vehicular Networks and smart interactions. Simulation is a key tool for the design and evaluation of Intelligent Transport Systems (ITS) that take advantage of communication-capable vehicles in order to provide valuable safety, traffic management, and infotainment services. It is widely recognized that simulation results are only significant when realistic models are considered within the simulation tool chain. However, quite often research works on the subject are based on simplistic models unable to capture the unique characteristics of vehicular communication networks. The support that different simulation tools offer for such models is discussed, as well as the steps that must be undertaken to fine-tune the model parameters in order to gather realistic results. Moreover, the book provides handy hints and references to help determine the most appropriate tools and models. This book will promote best simulation practices in order to obtain accurate results.

This book focuses on soft computing and how it can be applied to solve real-world problems arising in various domains, ranging from medicine and healthcare, to supply chain management, image processing and cryptanalysis. It gathers high-quality papers presented at the International Conference on Soft Computing: Theories and Applications (SoCTA 2019), organized by the National Institute of Technology Patna, India. Offering valuable insights into soft computing for teachers and researchers alike, the book will inspire further research in this dynamic field.

This book presents a selection of revised and extended versions of the best papers from the First International Conference on Social Networking and Computational Intelligence (SCI-2018), held in Bhopal, India, from October 5 to 6, 2018. It discusses recent advances in scientific developments and applications in these areas.

This book highlights cutting-edge research presented at the third installment of the International Conference on Smart City Applications (SCA2018), held in Tétouan, Morocco on October 10–11, 2018. It presents original research results, new ideas, and practical lessons learned that touch on all aspects of smart city applications. The respective papers share new and highly original results by leading experts on IoT, Big Data, and Cloud technologies, and address a broad range of key challenges in smart cities, including Smart Education and Intelligent Learning Systems, Smart Healthcare, Smart Building and Home Automation, Smart Environment and Smart Agriculture, Smart Economy and Digital Business, and Information Technologies and Computer Science, among others. In addition, various novel proposals regarding smart cities are discussed. Gathering peer-reviewed chapters written by prominent researchers from around the globe, the book offers an invaluable instructional and research tool for courses on computer and urban sciences; students and practitioners in computer science, information science, technology studies and urban management studies will find it particularly useful. Further, the book is an excellent reference guide for professionals and researchers working in mobility, education, governance, energy, the environment and computer sciences.

Industrial Internet of Things

ICIDCA 2019

2019 IEEE 7th Conference on Systems, Process and Control (ICSPC)

Information Systems Design and Intelligent Applications

Research Anthology on Usage and Development of Open Source Software

Advanced Video-Based Surveillance Systems

The book is a collection of high-quality peer-reviewed research papers presented at International Conference on Information System Design and Intelligent Applications (INDIA 2017) held at Duy Tan University, Da Nang, Vietnam during 15–17 June 2017. The book covers a wide range of topics of computer science and information technology discipline ranging from image processing, database application, data mining, grid and cloud computing, bioinformatics and many others. The various intelligent tools like swarm intelligence, artificial intelligence, evolutionary algorithms, bio-inspired algorithms have been well applied in different domains for solving various challenging problems.

Sharing my published writing paper for sharing knowledge

Like most industries around the world, the energy industry has also made, and continues to make, a long march toward "green" energy. The science has come a long way since the 1970s, and renewable energy and other green technologies are becoming more and more common, replacing fossil fuels. It is, however, still a struggle, both in terms of energy sources keeping up with demand, and the development of useful technologies in this area. To maintain the supply for electrical energy, researchers, engineers and other professionals in industry are continuously exploring new eco-friendly energy technologies and power electronics, such as solar, wind, tidal, wave, bioenergy, and fuel cells. These technologies have changed the concepts of thermal, hydro and nuclear energy resources by the adaption of power electronics advancement and revolutionary development in lower manufacturing cost for semiconductors with long time reliability. The latest developments in renewable resources have proved their potential to boost the economy of any country. Green energy technology has not only proved the concept of clean energy but also reduces the dependencies on fossil fuel for electricity generation through smart power electronics integration. Also, endless resources have more potential to cope with the requirements of smart building and smart city concepts. A valuable reference for engineers, scientists, chemists, and students, this volume is applicable to many different fields, across many different industries, at all levels. It is a must-have for any library.

bʺIoT-Enabled Smart Healthcare Systems, Services and ApplicationsExplore the latest healthcare applications of cutting-edge technologies In IoT-Enabled Smart Healthcare Systems, Services and Applications, an accomplished team of researchers delivers an insightful and comprehensive exploration of the roles played by cutting-edge technologies in modern healthcare delivery. The distinguished editors have included resources from a diverse array of learned experts in the field that combine to create a broad examination of a rapidly developing field. With a particular focus on Internet of Things (IoT) technologies, readers will discover how new technologies are impacting healthcare applications from remote monitoring systems to entire healthcare delivery methodologies. After an introduction to the role of emerging technologies in smart health care, this volume includes treatments of ICN-Fog computing, edge computing, security and privacy, IoT architecture, vehicular ad-hoc networks (VANETs), and patient surveillance systems, all in the context of healthcare delivery. Readers will also find: A thorough introduction to ICN-Fog computing for IoT based healthcare, including its architecture and challenges Comprehensive explorations of Internet of Things enabled software defined networking for edge computing in healthcare Practical discussions of a review of e-healthcare systems in India and Thailand, as well as the security and privacy issues that arise through the use of smart healthcare systems using Internet of Things devices In-depth examinations of the architecture and applications of an Internet of Things based healthcare system Perfect for healthcare practitioners and allied health professionals, hospital administrators, and technology professionals, IoT-Enabled Smart Healthcare Systems, Services and Applications is an indispensable addition to the libraries of healthcare regulators and policymakers seeking a one-stop resource that explains cutting-edge technologies in modern healthcare.

Proceedings of ICICCD 2020

Green Energy

Predictive Intelligence Using Big Data and the Internet of Things

Intelligent Embedded Systems

Proceedings of Second ICUIS 2022

Harnessing the Internet of Everything (IoE) for Accelerated Innovation Opportunities

In 15 similarly structured chapters, Transitioning to Smart Cities: Mapping Political, Economic, and Social Risks and Threats serves as a primer on smart cities, providing readers with no prior knowledge on smart cities with an understanding of the current smart cities debates. Gathering cutting-edge research and insights from academics, practitioners and policy-makers around the globe, Transitioning to Smart Cities identifies and discusses the nascent threats and challenges contemporary urban areas face, highlighting the drivers and ways of navigating these issues in an effective way. Uniquely providing a blend of conceptual academic analysis with empirical insights, Transitioning to Smart Cities produces policy recommendations that boost urban sustainability and resilience. With the multiplicity of qualitatively new issues and developments in these debates, Transitioning to Smart Cities offer an invaluable framework on current developments shaping today and tomorrow's urban Combines conceptual academic approaches with empirically-driven insights and best practices Offers new approaches and arguments from inter and multi-disciplinary perspectives Provides foundational knowledge and comparative insight from global case-studies that enable critical reflection and operationalization Generates policy recommendations that pave the way to debate and case-based planning

Advanced Video-Based Surveillance Systems presents second generation surveillance systems that automatically process large sets of signals for performance monitoring tasks. Included is coverage of different architecture designs, customization of surveillance architecture for end-users, advances in the processing of imaging sequences, security systems, sensors, and remote monitoring projects. Examples are provided of surveillance applications in highway traffic control, subway stations, wireless communications, and other areas. This work will be of interest to researchers in image processing, computer vision, digital signal processing, and telecommunications.

This book presents recent trends and enhancements in the convergence of immersive technology and smart cities. The authors discuss various domains such as medical education, construction, brain interface, interactive storytelling, edification, and journalism in relation to combining smart cities, IoT and immersive technologies. The book sets up a medium to promulgate insights and in depth understanding among experts in immersive technologies, IoT, HCI and associated establishments. The book also includes case studies, survey, models, algorithms, frameworks and implementations in storytelling, smart museum, medical education, journalism and more. Various practitioners, academicians and researchers in the domain contribute to the book.

This book presents the best-selected papers presented at the International Conference on Data Science, Computation and Security (IDSCS-2021), organized by the Department of Data Science, CHRIST (Deemed to be University), Pune Lavasa Campus, India, during April 16– 17, 2021. The proceeding is targeting the current research works in the areas of data science, data security, data analytics, artificial intelligence, machine learning, computer vision, algorithms design, computer networking, data mining, big data, text mining, knowledge representation, soft computing, and cloud computing.

Proceedings of SoCTA 2019

Soft Computing for Security Applications

Innovations in Smart Cities Applications Edition 2

Proceedings of SCI-2018

Proceedings of ICT4SD 2019, Volume 1

Internet of Things

Industrial Internet of Things: Technologies, Design, and Applications addresses the complete functional framework workflow in IoT technology. It explores basic and high-level concepts, thus serving as a manual for those in the industry while also helping beginners. The book incorporates the working methodology of Industrial IoT works, is based on the latest technologies, and will cover the major challenges, issues, and advances while exploring data-based intelligent and automated systems and their implications to the real world. The book discusses data acquisition, security, learning, intelligent data analysis, and case studies related to Industrial IoT-based applications.

This book proposes new technologies and discusses future solutions for ICT design infrastructures, as reflected in high-quality papers presented at the 4th International Conference on ICT for Sustainable Development (ICT4SD 2019), held in Goa, India, on 5–6 July 2019. The conference provided a valuable forum for cutting-edge research discussions among pioneering researchers, scientists, industrial engineers, and students from all around the world. Bringing together experts from different countries, the book explores a range of central issues from an international perspective.

The quick growth of computer technology and development of software caused it to be in a constant state of change and advancement. This advancement in software development meant that there would be many types of software developed in order to excel in usability and efficiency. Among these different types of software was open source software, one that grants permission for users to use, study, change, and distribute it freely. Due to its availability, open source software has quickly become a valuable asset to the world of computer technology and across various disciplines including education, business, and library science. The Research Anthology on Usage and Development of Open Source Software presents comprehensive research on the design and development of open source software as well as the ways in which it is used. The text discusses in depth the way in which this computer software has been made into a collaborative effort for the advancement of software technology. Discussing topics such as ISO standards, big data, fault prediction, open collaboration, and software development, this anthology is essential for computer engineers, software developers, IT specialists and consultants, instructors, librarians, managers, executives, professionals, academicians, researchers, and students.

This book is a collection of papers from international experts presented at the International Conference on NextGen Electronic Technologies (ICNETS2). ICNETS2 encompassed six symposia covering all aspects of electronics and communications engineering, including relevant nano/micro materials and devices. Highlighting recent research in intelligent embedded systems, the book is a valuable resource for professionals and students working in the core areas of electronics and their applications, especially in signal processing, embedded systems, and networking. The contents of this volume will be of interest to researchers and professionals alike.

Proceedings of SSIC 2021

Theory, Technologies and Applications (FC 2018)

Smart City Infrastructure

Augmented and Virtual Reality in IoT

Proceedings of the 2015 Federated Conference on Software Development and Object Technologies

Proceedings of IDSCS 2021

This book focuses on the integration of intelligent communication systems, control systems and devices related to all aspects of engineering and sciences. It includes high-quality research papers from the 4th International Conference on Intelligent Communication, Control and Devices (ICICCD 2020), organized by the Department of Electronics, Instrumentation and Control Engineering at the University of Petroleum and Energy Studies, Dehradun, India during 27-28 November 2020. The topics covered are a range of recent advances in intelligent communication, intelligent control, and intelligent devices.

This book features original papers from the 3rd International Conference on Smart IoT Systems: Innovations and Computing (SSIC 2021), presenting scientific work related to smart solution concepts. It discusses scientific works related to smart solutions concept in the context of computational collective intelligence consisted of interaction between smart devices for smart environments and interactions. Thanks to the high-quality content and the broad range of the topics covered, the book appeals to researchers pursuing advanced studies.

This book presents emerging concepts in data mining, big data analysis, communication, and networking technologies, and discusses the state-of-the-art in data engineering practices to tackle massive data distributions in smart networked environments. It also provides insights into potential data distribution challenges in ubiquitous data-driven networks, highlighting research on the theoretical and systematic framework for analyzing, testing and designing intelligent data analysis models for evolving communication frameworks. Further, the book showcases the latest developments in wireless sensor networks, cloud computing, mobile network, autonomous systems, cryptography, automation, and other communication and networking technologies. In addition, it addresses data security, privacy and trust, wireless networks, data classification, data prediction, performance analysis, data validation and verification models, machine learning, sentiment analysis, and various data analysis techniques.

SMART CITY INFRASTRUCTURE The wide range of topics presented in this book have been chosen to provide the reader with a better understanding of smart cities integrated with AI and blockchain and related security issues. The goal of this book is to provide detailed, in-depth information on the state-of-the-art architecture and infrastructure used to develop smart cities using the Internet of Things (IoT), artificial intelligence (AI), and blockchain security—the key technologies of the fourth industrial revolution. The book outlines the theoretical concepts, experimental studies, and various smart city applications that create value for inhabitants of urban areas. Several issues that have arisen with the advent of smart cities and novel solutions to resolve these issues are presented. The IoT along with the integration of blockchain and AI provides efficient, safe, secure, and transparent ways to solve different types of social, governmental, and demographic issues in the dynamic urban environment. A top-down strategy is adopted to introduce the architecture, infrastructure, features, and security. Audience The core audience is researchers in artificial intelligence, information technology, electronic and electrical engineering, systems engineering, industrial engineering as well as government and city planners.

Immersive Technology in Smart Cities

Ubiquitous Intelligent Systems

Internet of Things, for Things, and by Things

Multimedia Communications, Services and Security

The Blockchain Perspective

2021 5th International Conference on Internet of Things and Applications (IoT)

This book presents the proceedings of the International Conference SDOT which was organized at the University in Žilina, Faculty of Management Sciences and Informatics, Slovak Republic in November 19, 2015. The conference was truly international both in terms of the amount of foreign contributions and in terms of composition of steering and scientific committees. The book and the conference serves as a platform of professional exchange of knowledge and experience for the latest trends in software development and object-oriented technologies (theory and practice). This proceedings present information on the latest developments and mediate the exchange of experience between practitioners and academia.

The colloquium will provide an excellent platform for knowledge exchange between researchers, scientists, academicians and engineers working in the areas of automation, process, scientific research and analysis

The Internet of Things (IoT) is a closed-loop system in which a set of sensors is connected to servers via a network. The data from sensors are stored in a database and then analysed by IoT analytics. The results are usually employed by either humans, machines, or software to make decisions about the operation of the system. This book provides an interface between the main disciplines of engineering/technology and the organizational, administrative, and planning capabilities of managing the IoT.

The conference will bring together experts from the Smart computing and Communication systems community to discuss the timely issue of smart computing and low energy system design This will provide a forum for sharing insights, experiences and interaction on various aspects of evolving technologies and patterns related to Computer Science, Information Technology, Electronics, and associated Energy Systems The conference provides a platform for not only to the researchers from Asia but also from other continents across the globe, making this conference more international and attractive for participants

Vehicular Ad Hoc Networks

The Proceedings of the Third International Conference on Smart City Applications

Solar Energy, Photovoltaics, and Smart Cities

Society 5.0: Smart Future Towards Enhancing the Quality of Society

Futuristic Technologies for Interactive Modelling, Dimensioning, and Optimization

Proceedings of Fourth International Conference INDIA 2017