

Encryption And Decryption Using Matlab

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The world of medical technologies is undergoing a sea change in the domain of consumer culture. Having a grasp on what appeals to consumers and how consumers are making purchasing decisions is essential to the success of any organization that thrives by offering a product or service. As such, it is vital to examine the consumer-centered aspects of medical technological developments that have a patient-centered focus and allow patients to take part in their own personal health and wellness. Consumer-Driven Technologies in Healthcare: Breakthroughs in Research and Practice is a critical source of academic knowledge on the use of smartphones and other technological devices for cancer therapy, fitness and wellness, chronic disease monitoring, and other areas. The tracking of these items using technology has allowed consumers to take control of their own healthcare. Highlighting a range of pertinent topics such as clinical decision support systems, patient engagement, and electronic health records, this publication is an ideal reference source for doctors, nurse practitioners, hospital administrators, medical professionals, IT professionals, academicians, and researchers interested in advancing medical practice through technology.

This book covers basic principles of telecommunications and their applications in the design and analysis of modern networks and systems. Aimed to make telecommunications engineering easily accessible to students, this book contains numerous worked examples, case studies and review questions at the end of each section. Readers of the book can thus easily check their understanding of the topics progressively. To render the book more hands-on, MATLAB® software package is used to explain some of the concepts. Parts of this book are taught in undergraduate curriculum, while the rest is taught in graduate courses. Telecommunications Engineering: Theory and Practice treats both traditional and modern topics, such as blockchain, OFDM, OFDMA, SC-FDMA, LPDC codes, arithmetic coding, polar codes and non-orthogonal multiple access (NOMA).

The proceedings includes cutting-edge research articles from the Fourth International Conference on Signal and Image Processing (ICSIP), which is organised by Dr. N.G.P. Institute of Technology, Kalapatti, Coimbatore. The Conference provides academia and industry to discuss and present the latest technological advances and research results in the fields of theoretical, experimental, and application of signal, image and video processing. The book provides latest and most informative content from engineers and scientists in signal, image and video processing from around the world, which will benefit the future research community to work in a more cohesive and collaborative way.

This book reviews the state of the art of big data analysis and smart city. It includes issues which pertain to signal processing, probability models, machine learning, data mining, database, data engineering, pattern recognition, visualisation, predictive analytics, data warehousing, data compression, computer programming, smart city, etc. Data is becoming an increasingly decisive resource in modern societies, economies, and governmental organizations. Data science inspires novel techniques and theories drawn from mathematics, statistics, information theory, computer science, and social science. Papers in this book were the outcome of research conducted in this field of study. The latter makes use of applications and techniques related to data analysis in general and big data and smart city in particular. The book appeals to advanced undergraduate and graduate students, postdoctoral researchers, lecturers and industrial researchers, as well as anyone interested in big data analysis and smart city.

This book constitutes the refereed proceedings of the 6th International Conference on Information Processing, ICIP 2012, held in Bangalore, India, in August 2012. The 75 revised full papers presented were carefully reviewed and selected from 380 submissions. The papers are organized in topical sections on wireless networks; image processing; pattern recognition and classification; computer architecture and distributed computing; software engineering, information technology and optimization techniques; data mining techniques; computer networks and network security.

This book includes high-quality research papers presented at the Fourth International Conference on Innovative Computing and Communication (ICICC 2021), which is held at the Shaheed Sukhdev College of Business Studies, University of Delhi, Delhi, India, on February 20–21, 2021. Introducing the innovative works of scientists, professors, research scholars, students and industrial experts in the field of computing and communication, the book promotes the transformation of fundamental research into institutional and industrialized research and the conversion of applied exploration into real-time applications. The book provides insights into the Second International Conference on Computer Vision & Image Processing (CVIP-2017) organized by Department of Computer Science and Engineering of Indian Institute of Technology Roorkee. The book presents technological progress and research outcomes in the area of image processing and computer vision. The topics covered in this book are image/video processing and analysis; image/video formation and display; image/video filtering, restoration, enhancement and super-resolution; image/video coding and transmission; image/video storage, retrieval and authentication; image/video quality; transform-based and multi-resolution image/video analysis; biological and perceptual models for image/video processing; machine learning in image/video analysis; probability and uncertainty handling for image/video processing; motion and tracking; segmentation and recognition; shape, structure and stereo.

The book is a collection of high-quality peer-reviewed research papers presented in the International Conference on Artificial Intelligence and Evolutionary Computations in Engineering Systems (ICAIECES 2017). The book discusses wide variety of industrial, engineering and scientific applications of the emerging techniques. Researchers from academia and industry have presented their original work and ideas, information, techniques and applications in the field of communication, computing and power technologies.

Rsa Encryption and Decryption Using Matlab Communication Systems Principles Using MATLAB John Wiley & Sons

This book is a collection of peer-reviewed best-selected research papers presented at 4th International Conference on Computer Networks and Inventive Communication Technologies (ICCNCT 2021). The book covers new results in theory, methodology, and applications of computer networks and data communications. It includes original papers on computer networks, network protocols and wireless networks, data communication technologies, and network security. The proceedings of this conference are a valuable resource, dealing with both the important core and the specialized issues in the areas of next-

generation wireless network design, control, and management, as well as in the areas of protection, assurance, and trust in information security practice. It is a reference for researchers, instructors, students, scientists, engineers, managers, and industry practitioners for advanced work in the area.

This book gathers outstanding research papers presented at the International Joint Conference on Computational Intelligence (IJCCI 2018), which was held at Daffodil International University on 14–15 December 2018. The topics covered include: collective intelligence, soft computing, optimization, cloud computing, machine learning, intelligent software, robotics, data science, data security, big data analytics, and signal and natural language processing.

This comprehensive book is primarily intended for researchers, engineers, mathematicians and computer security specialists who are interested in multimedia security, steganography, encryption, and related research fields. It is also a valuable reference resource for postgraduate and senior undergraduate students who are studying multimedia, multimedia security, and information security, as well as for professionals in the IT industry.

ICOEI 2019 will provide an outstanding international forum for sharing knowledge and results in all fields of Engineering and Technology. The primary goal of the conference is to promote research and developmental activities in Electronics and Informatics. Another goal is to promote scientific information interchange between researchers, developers, engineers, students, and practitioners working in India and abroad. The conference is organized to make it an ideal platform for people to share views and experiences in Electronics, Informatics and related areas.

Discover the basic telecommunications systems principles in an accessible learn-by-doing format. *Communication Systems Principles Using MATLAB* covers a variety of systems principles in telecommunications in an accessible format without the need to master a large body of theory. The text puts the focus on topics such as radio and wireless modulation, reception and transmission, wired networks and fiber optic communications. The book also explores packet networks and TCP/IP as well as digital source and channel coding, and the fundamentals of data encryption. Since MATLAB® is widely used by telecommunications engineers, it was chosen as the vehicle to demonstrate many of the basic ideas, with code examples presented in every chapter. The text addresses digital communications with coverage of packet-switched networks. Many fundamental concepts such as routing via shortest-path are introduced with simple and concrete examples. The treatment of advanced telecommunications topics extends to OFDM for wireless modulation, and public-key exchange algorithms for data encryption. Throughout the book, the author puts the emphasis on understanding rather than memorization. The text also: Includes many useful take-home skills that can be honed while studying each aspect of telecommunications. Offers a coding and experimentation approach with many real-world examples provided. Gives information on the underlying theory in order to better understand conceptual developments. Suggests a valuable learn-by-doing approach to the topic. Written for students of telecommunications engineering, *Communication Systems Principles Using MATLAB®* is the hands-on resource for mastering the basic concepts of telecommunications in a learn-by-doing format.

This book focuses on soft computing and its applications to solve real-life problems occurring in different domains ranging from medical and health care, supply chain management and image processing to cryptanalysis. It presents the proceedings of International Conference on Soft Computing: Theories and Applications (SoCTA 2016), offering significant insights into soft computing for teachers and researchers and inspiring more and more researchers to work in the field of soft computing. >The term soft computing represents an umbrella term for computational techniques like fuzzy logic, neural networks, and nature inspired algorithms. In the past few decades, there has been an exponential rise in the application of soft computing techniques for solving complex and intricate problems arising in different spheres of life. The versatility of these techniques has made them a favorite among scientists and researchers working in diverse areas. SoCTA is the first international conference being organized at Amity University Rajasthan (AUR), Jaipur. The objective of SoCTA 2016 is to provide a common platform to researchers, academicians, scientists, and industrialists working in the area of soft computing to share and exchange their views and ideas on the theory and application of soft computing techniques in multi-disciplinary areas. The aim of the conference is to bring together young and experienced researchers, academicians, scientists, and industrialists for the exchange of knowledge. SoCTA especially encourages the young researchers at the beginning of their career to participate in this conference and present their work on this platform.

Blockchain technology is an emerging distributed, decentralized architecture and computing paradigm, which has accelerated the development and application of cloud, fog and edge computing; artificial intelligence; cyber physical systems; social networking; crowdsourcing and crowdsensing; 5g; trust management and finance; and other many useful sectors. Nowadays, the primary blockchain technology uses are in information systems to keep information secure and private. However, many threats and vulnerabilities are facing blockchain in the past decade such as 51% attacks, double spending attacks, etc. The popularity and rapid development of blockchain brings many technical and regulatory challenges for research and academic communities. The main goal of this book is to encourage both researchers and practitioners of Blockchain technology to share and exchange their experiences and recent studies between academia and industry. The reader will be provided with the most up-to-date knowledge of blockchain in mainstream areas of security and privacy in the decentralized domain, which is timely and essential (this is due to the fact that the distributed and p2p applications are increasing day-by-day, and the attackers adopt new mechanisms to threaten the security and privacy of the users in those environments). This book provides a detailed explanation of security and privacy with respect to blockchain for information systems, and will be an essential resource for students, researchers and scientists studying blockchain uses in information systems and those wanting to explore the current state of play.

This book is a collection of accepted papers that were presented at the International Conference on Communication and Computing Systems (ICCCS-2016), Dronacharya College of Engineering, Gurgaon, September 9–11, 2016. The purpose of the conference was to provide a platform for interaction between scientists from industry, academia and other areas of society to discuss the current advancements in the field of communication and computing systems. The papers submitted to the proceedings were peer-reviewed by 2-3 expert referees. This volume contains 5 main subject areas: 1. Signal and Image Processing, 2. Communication & Computer Networks, 3. Soft Computing, Intelligent System, Machine Vision and Artificial Neural Network, 4. VLSI & Embedded System, 5. Software Engineering and Emerging Technologies.

This book presents essential principles, technical information, and expert insights on multimedia security technology. Illustrating the need for improved content security as the Internet and digital multimedia applications rapidly evolve, it presents a wealth of everyday protection application examples in fields including . Giving readers an in-depth introduction to different aspects of information security mechanisms and methods, it also serves as an instructional tool on the fundamental theoretical framework required for the development of advanced techniques.

This book includes high-quality, peer-reviewed papers from the International Conference on Recent Advancement in Computer, Communication and Computational Sciences (RACCCS-2018), held at Aryabhata College of Engineering & Research Center, Ajmer, India on August 10–11, 2018, presenting the latest developments and technical solutions in computational sciences. Networking and communication are the backbone of data science, data- and knowledge engineering, which have a wide scope for implementation in engineering sciences. This book offers insights that reflect the advances in these fields from upcoming researchers and leading academicians across the globe. Covering a variety of topics, such as intelligent hardware and software design, advanced communications, intelligent computing technologies, advanced software engineering, the web and informatics, and intelligent image processing, it helps those in the computer industry and academia use the advances in next-generation

communication and computational technology to shape real-world applications.

The book presents innovative scientific research works by academics, research scholars and students, presented at the 2017 International Conference on Energy, Materials and Information Technology at Amity University Jharkhand, India. It includes contributions on system solutions based on soft computing techniques, and covers innovative soft computing techniques and tools with advanced applications. A major focus of the book is on presenting interdisciplinary problems and how they can be solved using information technology, together with innovative connections to other disciplines. It also includes papers on cloud computing and WSN-related real-time research.

These proceedings of the World Congress 2006, the fourteenth conference in this series, offer a strong scientific program covering a wide range of issues and challenges which are currently present in Medical physics and Biomedical Engineering. About 2,500 peer reviewed contributions are presented in a six volume book, comprising 25 tracks, joint conferences and symposia, and including invited contributions from well known researchers in this field.

With the spread of the powerhouse MATLAB software into nearly every area of math, science, and engineering, it is important to have a strong introduction to using the software. Updated for version 7.0, MATLAB Primer, Seventh Edition offers such an introduction as well as a "pocketbook" reference for everyday users of the software. It offers an intu

Applied Abstract Algebra with Maple™ and MATLAB® provides an in-depth introduction to real-world abstract algebraic problems. This popular textbook covers a variety of topics including block designs, coding theory, cryptography, and counting techniques, including Pólya's and Burnside's theorems. The book also includes a concise review of all prerequisite advanced mathematics. The use of sophisticated mathematical software packages such as Maple™ and MATLAB® allows students to work through realistic examples without having to struggle with extensive computations. Notable additions to the third edition include expanded contemporary applications, coverage of the two-message problem, and a full chapter on symmetry in Western music. Several other parts of the book were also updated, including some MATLAB sections due to their adoption of the MuPAD computer algebra system since the last edition. This edition also contains more than 100 new exercises. This new edition includes the two most widely used mathematical software packages. It builds upon the successful previous editions, favored by instructors and students alike.

This book provides readers with a selection of high-quality chapters that cover both theoretical concepts and practical applications of image feature detectors and descriptors. It serves as reference for researchers and practitioners by featuring survey chapters and research contributions on image feature detectors and descriptors. Additionally, it emphasizes several keywords in both theoretical and practical aspects of image feature extraction. The keywords include acceleration of feature detection and extraction, hardware implantations, image segmentation, evolutionary algorithm, ordinal measures, as well as visual speech recognition.

These are the proceedings of the International Conference on ISMAC-CVB, held in Palladam, India, in May 2018. The book focuses on research to design new analysis paradigms and computational solutions for quantification of information provided by object recognition, scene understanding of computer vision and different algorithms like convolutional neural networks to allow computers to recognize and detect objects in images with unprecedented accuracy and to even understand the relationships between them. The proceedings treat the convergence of ISMAC in Computational Vision and Bioengineering technology and includes ideas and techniques like 3D sensing, human visual perception, scene understanding, human motion detection and analysis, visualization and graphical data presentation and a very wide range of sensor modalities in terms of surveillance, wearable applications, home automation etc. ISMAC-CVB is a forum for leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of computational vision and bioengineering.

Master the essentials of cryptography and cryptanalysis and learn how to put them to practical use. Each chapter of this book starts with an introduction to the concepts on which cryptographic algorithms are based and how they are used in practice, providing fully working examples for each of the algorithms presented. Implementation sections will guide you through the entire process of writing your own applications and programs using MATLAB. Cryptography and Cryptanalysis in MATLAB will serve as your definitive go-to cryptography reference, whether you are a student, professional developer, or researcher, showing how a multitude of cryptographic challenges can be overcome using the powerful tools of MATLAB. What You Will Learn Discover MATLAB's cryptography functions Work with conversion mechanisms in MATLAB Implement cryptographic algorithms using arithmetic operations Understand the classical, simple cryptosystems that form the basis of modern cryptography Develop fully working solutions (encryption/decryption operations) Study pseudo-random generators and their real-life implementations Utilize hash functions by way of practical examples Implement solutions to defend against practical cryptanalysis methods and attacks Understand asymmetric and symmetric encryption systems and how to use them Leverage visual cryptography, steganography, and chaos-based cryptography Who This Book Is For Those who are new to cryptography/analysis. Some prior exposure to MATLAB recommended.

This proceedings book is the fourth edition of a series of works which features emergent research trends and recent innovations related to smart city presented at the 5th International Conference on Smart City Applications SCA20 held in Safranbolu, Turkey. This book is composed of peer-reviewed chapters written by leading international scholars in the field of smart cities from around the world. This book covers all the smart city topics including Smart Citizenship, Smart Education, Smart Mobility, Smart Healthcare, Smart Security, Smart Earth Environment & Agriculture, Smart Economy, Smart Factory and Smart Recognition Systems. This book contains a special section intended for Covid-19 pandemic researches. This book edition is an invaluable resource for courses in computer science, electrical engineering and urban sciences for sustainable development.

This book gathers high-quality papers presented at the Second International Conference on Sustainable Technologies for Computational Intelligence (ICTSCI 2021) held at Graphic Era University, Dehradun, India, during May 22–23, 2021. It covers emerging topics in computational intelligence and effective strategies for its implementation in engineering applications.

This book constitutes the thoroughly refereed post-conference proceedings of the 8th International Conference on Security for Information Technology and Communications, SECITC 2015, held in Bucharest, Romania, in June 2015. The 17 revised full papers were carefully reviewed and selected from 36 submissions. In addition with 5 invited talks the papers cover topics such as Cryptographic Algorithms and Protocols, Security Technologies for IT&C, Information Security Management, Cyber Defense, and Digital Forensics.

The communication field is evolving rapidly in order to keep up with society's demands. As such, it becomes imperative to research and report recent advancements in computational

intelligence as it applies to communication networks. The Handbook of Research on Recent Developments in Intelligent Communication Application is a pivotal reference source for the latest developments on emerging data communication applications. Featuring extensive coverage across a range of relevant perspectives and topics, such as satellite communication, cognitive radio networks, and wireless sensor networks, this book is ideally designed for engineers, professionals, practitioners, upper-level students, and academics seeking current information on emerging communication networking trends.

The two-volume set LNCS 6753/6754 constitutes the refereed proceedings of the 8th International Conference on Image and Recognition, ICIAR 2011, held in Burnaby, Canada, in June 2011. The 84 revised full papers presented were carefully reviewed and selected from 147 submissions. The papers are organized in topical sections on image and video processing; feature extraction and pattern recognition; computer vision; color, texture, motion and shape; tracking; biomedical image analysis; biometrics; face recognition; image coding, compression and encryption; and applications.

This book constitutes the refereed proceedings of the 25th International Conference on Information and Software Technologies, ICIST 2019, held in Vilnius, Lithuania, in October 2019. The 46 papers presented were carefully reviewed and selected from 121 submissions. The papers are organized in topical sections on information systems; business intelligence for information and software systems; information technology applications; software engineering.

This book constitutes the refereed post-conference proceedings of the Second International Conference on Cyber Security and Computer Science, ICONCS 2020, held in Dhaka, Bangladesh, in February 2020. The 58 full papers were carefully reviewed and selected from 133 submissions. The papers detail new ideas, inventions, and application experiences to cyber security systems. They are organized in topical sections on optimization problems; image steganography and risk analysis on web applications; machine learning in disease diagnosis and monitoring; computer vision and image processing in health care; text and speech processing; machine learning in health care; blockchain applications; computer vision and image processing in health care; malware analysis; computer vision; future technology applications; computer networks; machine learning on imbalanced data; computer security; Bangla language processing.

INTERNATIONAL WORKSHOPS (at IAREC'17) (This book includes English (main) and Turkish languages) International Workshop on Mechanical Engineering International Workshop on Mechatronics Engineering International Workshop on Energy Systems Engineering International Workshop on Automotive Engineering and Aerospace Engineering International Workshop on Material Engineering International Workshop on Manufacturing Engineering International Workshop on Physics Engineering International Workshop on Electrical and Electronics Engineering International Workshop on Computer Engineering and Software Engineering International Workshop on Chemical Engineering International Workshop on Textile Engineering International Workshop on Architecture International Workshop on Civil Engineering International Workshop on Geomatics Engineering International Workshop on Industrial Engineering International Workshop on Food Engineering International Workshop on Aquaculture Engineering International Workshop on Agriculture Engineering International Workshop on Mathematics Engineering International Workshop on Bioengineering Engineering International Workshop on Biomedical Engineering International Workshop on Genetic Engineering International Workshop on Environmental Engineering International Workshop on Other Engineering Science

Chaos-based cryptography, attracting many researchers in the past decade, is a research field across two fields, i.e., chaos (nonlinear dynamic system) and cryptography (computer and data security). It Chaos' properties, such as randomness and ergodicity, have been proved to be suitable for designing the means for data protection. The book gives a thorough description of chaos-based cryptography, which consists of chaos basic theory, chaos properties suitable for cryptography, chaos-based cryptographic techniques, and various secure applications based on chaos. Additionally, it covers both the latest research results and some open issues or hot topics. The book creates a collection of high-quality chapters contributed by leading experts in the related fields. It embraces a wide variety of aspects of the related subject areas and provide a scientifically and scholarly sound treatment of state-of-the-art techniques to students, researchers, academics, personnel of law enforcement and IT practitioners who are interested or involved in the study, research, use, design and development of techniques related to chaos-based cryptography.

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