Computer Analysis of Images and Patterns advances in VLSI, Communication, and Signal Processing Image Processing, Analysis, and Machine Vision Soft Computing for Problem Solving Image Processing and Acquisition using Python, Hybrid and Advanced Compression Techniques for Medical Images Security and Privacy in New Computing Environments Embedded System Design of JPEG Image Compression Proceedings of SAI Intelligent Systems Conference (IntelliSys) 2016 Intellectual Property Protection for Multimedia Information Technology Image and Signal Processing Advances in Signal Processing and Intelligent Recognition Systems Intelligent Control and Innovative Computing Mobile TV JPEG 2000 Standard for Image Compression Research Anthology on Telemedicine Efficacy, Adoption, and Impact on Healthcare Delivery Global Trends in Information Systems and Software Applications Optimization Models in Steganography Using Metaheuristics ECIW 2010 Proceedings of the 9th European Conference on Information Warfare and Security JPEG Image Compression on the Texas Instrument Video Processing Board TM S320DM 6437iCT Analysis and Applications Control and Signal Processing Applications for Mobile and Aerial Robotic Systems Wavelets in Soft Computing Business and Telecommunications Image Processing Information Technology for Intellectual Property Protection: Interdisciplinary Advancements Emerging Innovations in Wireless Networks and Broadband Technologies Still Image Compression on Parallel Computer Architectures Emerging Technologies in Data Mining and Information Security JPEG Image Compression Using Discrete Cosine Transform Digital Rights Management: Concepts, Methodologies, Tools, and Applications Embedded System Design of JPEG Image Decompression Proceedings of Integrated Intelligence Enable Networks and Computing Multidisciplinary Approach to Modern Digital Steganography A NOVEL APPROACH OF AUTHENTICATION USING PIXEL VALUE GRAPHICAL PASS WORD SCHEMA Advanced Informatics for Computing Research Optimal Compression Using Discrete Cosine Transformation in Matlab Image Compression Using Discrete Cosine Transform and Discrete Wavelet Transform Emerging Research in Electronics, Computer Science and Technology Proceedings of the 11th National Technical Seminar on Unmanned System Technology 2019

Computer Analysis of Images and Patterns

Image Processing and Acquisition using Python provides readers with a sound foundation in both image acquisition and image processing—one of the first books to integrate these topics together. By improving readers' knowledge of image acquisition techniques and corresponding image processing, the book will help them perform experiments more effectively and cost efficiently as well as analyze and measure more accurately. Long recognized as one of the easiest languages for non-programmers to learn, Python is used in a variety of practical examples. A refresher for more experienced readers, the first part of the book presents an introduction to Python, Python modules, reading and writing images using Python, and an introduction to images. The second part discusses the basics of image processing, including pre/post processing using filters, segmentation, morphological operations, and measurements. The second part describes image acquisition using various modalities, such as x-ray, CT, MRI, light microscopy, and electron microscopy. These modalities encompass...
most of the common image acquisition methods currently used by researchers in academia and industry. Features Covers both the physical methods of obtaining images and the analytical processing methods required to understand the science behind the images. Contains many examples, detailed derivations, and working Python examples of the techniques. Offers practical tips on image acquisition and processing. Includes numerous exercises to test the reader’s skills in Python programming and image processing, with solutions to selected problems, example programs, and images available on the book’s web page. New to this edition Machine learning has become an indispensable part of image processing and computer vision, so in this new edition two new chapters are included: one on neural networks and the other on convolutional neural networks. A new chapter on affine transform and many new algorithms. Updated Python code aligned to the latest version of modules.

Advances in VLSI, Communication, and Signal Processing

This book presents best selected research papers presented at the First International Conference on Integrated Intelligence Enable Networks and Computing (IIENC 2020), held from May 25 to May 27, 2020, at the Institute of Technology, Gopeshwar, India (Government Institute of Uttarakhand Government and affiliated to Uttarakhand Technical University). The book includes papers in the field of intelligent computing. The book covers the areas of machine learning and robotics, signal processing and Internet of things, big data and renewable energy sources.

Image Processing, Analysis, and Machine Vision

The main goal of this project is to implement the DCT and quantization of a JPEG image compression algorithm using hardware. Basically, in this project the JPEG algorithm converts an image from BMP format into a JPEG format. The main step of this algorithm is discrete cosine transform (DCT) which is implemented using hardware (ATmega32 microcontroller) and other parts are implemented using Microsoft Foundation Class (MFC) library based application. The other main thing in this project was to interface a micro-controller with the computer in order to receive data from computer for processing DCT on it and then send back the processed data to the computer. The media used for this communication is RS-232 and one other chip, MAX-232 which converts data between RS-232 and TTL format. The MFC Application takes in the BMP format image as an input. After that this application works on extracting the raw data from that image in order to send it to a micro-controller for further processing and waits until micro-controller finishes the processing. As soon as micro-controller is done with processing, it sends data back to MFC application and then MFC application completes remaining processing steps in JPEG compression algorithm and creates an image in JPEG format which is very small in size as compared to BMP format. The report will further discuss how all the things like MFC application is implemented, hardware is setup and how an interfacing between computer and micro-controller is established.

Soft Computing for Problem Solving

It is used specially for the compression of images where tolerable degradation is required. With the wide use of
Online Library Jpeg Image Compression Using Discrete Cosine Transform A

computers and consequently need for large scale storage and transmission of data, efficient ways of storing of data have become necessary. With the growth of technology and entrance into the Digital Age, the world has found itself amid a vast amount of information. Dealing with such enormous information can often present difficulties. Image compression is minimizing the size in bytes of a graphics file without degrading the quality of the image to an unacceptable level. The reduction in file size allows more images to be stored in a given amount of disk or memory space. It also reduces the time required for images to be sent over the Internet or downloaded from Web pages. JPEG and JPEG 2000 are two important techniques used for image compression. JPEG image compression standard use DCT (DISCRETE COSINE TRANSFORM). The discrete cosine transform is a fast transform. It is a widely used and robust method for image compression. It has excellent compaction for highly correlated data. DCT has fixed basis images DCT gives good compromise between information packing ability and computational complexity. JPEG 2000 image compression standard makes use of DWT (DISCRETE WAVELET TRANSFORM). DWT can be used to reduce the image size without losing much of the resolutions computed and values less than a pre-specified threshold are discarded. Thus it reduces the amount of memory required to represent given image.

Image Processing and Acquisition using Python

JPEG2000 Standard for Image Compression presents readers with the basic background to this multimedia compression technique and prepares the reader for a detailed understanding of the JPEG2000 standard, using both the underlying theory and the principles behind the algorithms of the JPEG2000 standard for scalable image compression. It introduces the VLSI architectures and algorithms for implementation of the JPEG2000 standard in hardware (not available in the current literature), an important technology for a number of image processing applications and devices such as digital camera, color fax, printer, and scanners.

Hybrid and Advanced Compression Techniques for Medical Images

This book contains the best papers of the 5 International Conference on e-Business and Telecommunications (ICETE), which was held in July 2008, in Porto, Portugal. This conference reflects a continuing effort to increase the dissemination of recent research results among professionals who work in the areas of e-business and telecommunications. ICETE is a joint international conference integrating four major areas of knowledge that are divided into four corresponding conferences: ICE-B (International Conf. on e-Business), SECRYPT (International Conf. on Security and Cryptography), SIGMAP (Int’l Conf. on Signal Processing and Multimedia) and WINSYS (International Conf. on Wireless Information Systems). The program of this joint conference included several outstanding keynote lectures presented by internationally renowned distinguished researchers who are experts in the various ICETE areas. Their keynote speeches have contributed to heightening the overall quality of the program and significance of the theme of the conference. The conference topic areas define a broad spectrum in the key areas of e-business and telecommunications. This wide-view reporting made ICETE appealing to a global audience of engineers, scientists, business practitioners and policy experts. The papers - accepted and presented at the conference demonstrated a number of new and innovative solutions for e-business and telecommunication networks and systems, showing that the technical problems in these closely related fields are
challenging and worthwhile - approaching an interdisciplinary perspective such as that promoted by ICETE.

Security and Privacy in New Computing Environments

This book introduces advanced and hybrid compression techniques specifically used for medical images. The book discusses conventional compression and compressive sensing (CS) theory based approaches that are designed and implemented using various image transforms, such as: Discrete Fourier Transform (DFT), Discrete Cosine Transform (DCT), Discrete Wavelet Transform (DWT), and Singular Value Decomposition (SVD) and greedy based recovery algorithm. The authors show how these techniques provide simulation results of various compression techniques for different types of medical images, such as MRI, CT, US, and x-ray images. Future research directions are provided for medical imaging science. The book will be a welcomed reference for engineers, clinicians, and research students working with medical image compression in the biomedical imaging field. Covers various algorithms for data compression and medical image compression; Provides simulation results of compression algorithms for different types of medical images; Provides study of compressive sensing theory for compression of medical images.

Embedded System Design of JPEG Image Compression

This book includes research papers from the 11th National Technical Symposium on Unmanned System Technology. Covering a number of topics, including intelligent robotics, novel sensor technology, control algorithms, acoustics signal processing, imaging techniques, biomimetic robots, green energy sources, and underwater communication backbones and protocols, it will appeal to researchers developing marine technology solutions and policy-makers interested in technologies to facilitate the exploration of coastal and oceanic regions.

Proceedings of SAI Intelligent Systems Conference (IntelliSys) 2016

In decades, authentication system is relying on username and password as passphrase object for authentication process. The username and password mechanism bring major problem lately and raising the system developer worries on security for client server communication. Many methods and mechanisms are being introduced to overcome this authentication flaws. One of mechanism that has been introduce is graphical password mechanism on purpose to reduce human memory burden based on psychological study that shows human is better at recognizing and remembering images. However, the current method result many security flaw on graphical password authentication mechanism and require specific tool which is cannot be easily implement on any computer system platform. To overcome current method flaws, pixel value graphical password scheme is being introduced by combining the text-based password mechanism and graphical password mechanism where the authentication system extracting pixel value that resides in a digital image file. The extracted eight bits pixel value is used as the passphrase alongside with username during authentication process. The design and development of this method is based on identified graphical password enhancement and user requirement through literature review analysis. Results on literature analysis are being referred to develop the system flow and system design as the design concept
which is being used for prototyping development. The developed prototype is being tested with several collections of image specimens as image experimental testing. Results and output from the testing show promising results as the result for Pixel Value graphical password scheme is bring an extremely positive impact. In other words, pixel value graphical password scheme is bringing graphical password scheme a secure promising authentication implementation.

**Intellectual Property Protection for Multimedia Information Technology**

Since previously published intellectual property law and business research discusses institutional analyses without interdisciplinary insights by technical experts, and technical references tend to concern engineering solutions without considering the social impact of institutional protection of multimedia digital information, there is a growing demand for a resource that bridges the gap between multimedia intellectual property protection law and technology. Intellectual Property Protection for Multimedia Information Technology provides scholars, management professionals, researchers, and lawyers in the field of multimedia information technology and its institutional practice with thorough coverage of the full range of issues surrounding multimedia intellectual property protection and its proper solutions from institutional, technical, and legal perspectives.

**Image and Signal Processing**

This book comprises select proceedings of the International Conference on VLSI, Communication and Signal processing (VCAS 2018). It looks at latest research findings in VLSI design and applications. The book covers a wide range of topics in electronics and communication engineering, especially in the area of microelectronics and VLSI design, communication systems and networks, and image and signal processing. The contents of this book will be useful to researchers and professionals alike.

**Advances in Signal Processing and Intelligent Recognition Systems**

A large international conference on Advances in Intelligent Control and Innovative Computing was held in Hong Kong, March 16-18, 2011, under the auspices of the International MultiConference of Engineers and Computer Scientists (IMECS 2010). The IMECS is organized by the International Association of Engineers (IAENG). Intelligent Control and Computer Engineering contains 25 revised and extended research articles written by prominent researchers participating in the conference. Topics covered include artificial intelligence, control engineering, decision supporting systems, automated planning, automation systems, systems identification, modelling and simulation, communication systems, signal processing, and industrial applications. Intelligent Control and Innovative Computing offers the state of the art of tremendous advances in intelligent control and computer engineering and also serves as an excellent reference text for researchers and graduate students, working on intelligent control and computer engineering.

**Intelligent Control and Innovative Computing**
This two-volume book presents outcomes of the 7th International Conference on Soft Computing for Problem Solving, SocProS 2017. This conference is a joint technical collaboration between the Soft Computing Research Society, Liverpool Hope University (UK), the Indian Institute of Technology Roorkee, the South Asian University New Delhi and the National Institute of Technology Silchar, and brings together researchers, engineers and practitioners to discuss thought-provoking developments and challenges in order to select potential future directions. The book presents the latest advances and innovations in the interdisciplinary areas of soft computing, including original research papers in the areas including, but not limited to, algorithms (artificial immune systems, artificial neural networks, genetic algorithms, genetic programming, and particle swarm optimization) and applications (control systems, data mining and clustering, finance, weather forecasting, game theory, business and forecasting applications). It is a valuable resource for both young and experienced researchers dealing with complex and intricate real-world problems for which finding a solution by traditional methods is a difficult task.

Mobile TV

This two-volume set (CCIS 1075 and CCIS 1076) constitutes the refereed proceedings of the Third International Conference on Advanced Informatics for Computing Research, ICAICR 2019, held in Shimla, India, in June 2019. The 78 revised full papers presented were carefully reviewed and selected from 382 submissions. The papers are organized in topical sections on computing methodologies; hardware; information systems; networks; software and its engineering.

JPEG2000 Standard for Image Compression

In today's world of computing, it is hardly possible to do without graphics, images and sound. Uncompressed data needs very large amount of physical storage space and transmission time. The availability of storage media and transmission channels are limited. Transmission of images requires high bandwidth or expensive cables. JPEG is the current standard for compression and decompression of still, monochrome and color images. The purpose of this study is to develop a compression algorithm to reduce time in image transmission. The C/C++ language is used for implementation. As in JPEG, Discrete Cosine Transform (DCT) is used as coding transformation. Static Huffman Tree is constituted for our requirements. As a case study, Windows Bitmap (BMP) files are used. The encoded data is formed as binary file and after transmission it is stored as it was before.

Research Anthology on Telemedicine Efficacy, Adoption, and Impact on Healthcare Delivery

The book features research papers presented at the International Conference on Emerging Technologies in Data Mining and Information Security (IEMIS 2018) held at the University of Engineering & Management, Kolkata, India, on February 23–25, 2018. It comprises high-quality research by academics and industrial experts in the field of computing and communication, including full-length papers, research-in-progress papers, case studies related to all the areas of data mining, machine learning, IoT and information security.
Global Trends in Information Systems and Software Applications

"This reference is a comprehensive collection of recent case studies, theories, research on digital rights management, and its place in the world today"--

Optimization Models in Steganography Using Metaheuristics

This book constitutes the refereed proceedings of the 2nd EAI International Conference on Security and Privacy in New Computing Environments, SPNCE 2019, held in Tianjin, China, in April 2019. The 62 full papers were selected from 112 submissions and are grouped into topics on privacy and security analysis, Internet of Things and cloud computing, system building, scheme, model and application for data, mechanism and method in new computing.

ECIW 2010-Proceedings of the 9th European Conference on Information Warfare and Security

This book constitutes the refereed proceedings of the 4th International Symposium on Advances in Signal Processing and Intelligent Recognition Systems, SIRS 2018, held in Bangalore, India, in September 2018. The 28 revised full papers and 11 revised short papers presented were carefully reviewed and selected from 92 submissions. The papers cover wide research fields including information retrieval, human-computer interaction (HCI), information extraction, speech recognition.

JPEG Image Compression on the Texas Instrument Video Processing Board TMS320DM 6437

This book presents the state of integration of wavelet theory and multiresolution analysis into soft computing. It is the first book on hybrid methods combining wavelet analysis with fuzzy logic, neural networks or genetic algorithms. Much attention is given to new approaches (fuzzy-wavelet) that permit one to develop, using wavelet techniques, linguistically interpretable fuzzy systems from data. The book also introduces the reader to wavelet-based genetic algorithms and multiresolution search. A special place is given to methods that have been implemented in real world applications, particularly the different techniques combining fuzzy logic or neural networks with wavelet theory.

Contents: Introduction to Wavelet Theory; Pre-Processing; The Multiresolution Approach; Spline-Based Wavelets Approximation and Compression Algorithms; Automatic Generation of a Fuzzy System with Wavelet Based Methods; On-Line Learning; Nonparametric Wavelet-Based Estimation and Regression Techniques; Developing Intelligent Products; Genetic Algorithms and Multiresolution. Readership: Graduate students, researchers, academics/lecturers and industrialists in fuzzy logic.

ICT Analysis and Applications
Due to technological advancements in recent years, wireless systems have experienced significant improvements in reliability and performance. Now deeply integrated into daily life in modern society, these systems have become a widely studied topic. Emerging Innovations in Wireless Networks and Broadband Technologies is a pivotal reference source for the latest scholarly research on the various applications and functionality of wireless technologies. Highlighting critical issues relating to network optimization and efficiency, this book is ideally designed for researchers, upper-level students, practitioners, and professionals interested in the recent developments within the field of wireless systems.

Control and Signal Processing Applications for Mobile and Aerial Robotic Systems

Wavelets in Soft Computing

e-Business and Telecommunications

Information technology for intellectual property protection has become an increasingly important issue due to the expansion of ubiquitous network connectivity, which allows people to use digital content and programs that are susceptible to unauthorized electric duplication or copyright and patent infringement. Information Technology for Intellectual Property Protection: Interdisciplinary Advancements contains multidisciplinary knowledge and analysis by leading researchers and practitioners with technical backgrounds in information engineering and institutional experience in intellectual property practice. Through its discussions of both engineering solutions and the social impact of institutional protection, this book fills a gap in the existing literature and provides methods and applications for both practitioners and IT engineers.

Image Processing

These proceedings of the SAI Intelligent Systems Conference 2016 (IntelliSys 2016) offer a remarkable collection of papers on a wide range of topics in intelligent systems, and their applications to the real world. Authors hailing from 56 countries on 5 continents submitted 404 papers to the conference, attesting to the global importance of the conference’s themes. After being reviewed, 222 papers were accepted for presentation, and 168 were ultimately selected for these proceedings. Each has been reviewed on the basis of its originality, novelty and rigorousness. The papers not only present state-of-the-art methods and valuable experience from researchers in the related research areas; they also outline the field’s future development.

Information Technology for Intellectual Property Protection: Interdisciplinary Advancements
Steganography is the art of secret writing. The purpose of steganography is to hide the presence of a message from the intruder by using state-of-the-art methods, algorithms, architectures, models, and methodologies in the domains of cloud, internet of things (IoT), and Android platform. Though security controls in cloud computing, IoT, and Android platforms are not much different than security controls in an IT environment, they might still present different types of risks to an organization than the classic IT solutions. Therefore, a detailed discussion is needed in case there is a breach in security. It is important to review the security aspects of cloud, IoT, and Android platforms related to steganography to determine how this new technology is being utilized and improved continuously to protect information digitally. The benefits and challenges, along with the current and potential developments for the future, are important keystones in this critical area of security research. Multidisciplinary Approach to Modern Digital Steganography reviews the security aspects of cloud, IoT, and Android platforms related to steganography and addresses emerging security concerns, new algorithms, and case studies in the field. Furthermore, the book presents a new approach to secure data storage on cloud infrastructure and IoT along with including discussions on optimization models and security controls that could be implemented. Other important topics include data transmission, deep learning techniques, machine learning, and both image and text stenography. This book is essential for forensic engineers, forensic analysts, cybersecurity analysts, cyber forensic examiners, security engineers, cybersecurity network analysts, cyber network defense analysts, and digital forensic examiners along with practitioners, researchers, academicians, and students interested in the latest techniques and state-of-the-art methods in digital steganography.

Emerging Innovations in Wireless Networks and Broadband Technologies

This book proposes new technologies and discusses future solutions for ICT design infrastructures, as reflected in high-quality papers presented at the 5th International Conference on ICT for Sustainable Development (ICT4SD 2020), held in Goa, India, on 23-24 July 2020. 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.

Still Image Compression on Parallel Computer Architectures

This book explores the use of a socio-inspired optimization algorithm (the Cohort Intelligence algorithm), along with Cognitive Computing and a Multi-Random Start Local Search optimization algorithm. One of the most important types of media used for steganography is the JPEG image. Considering four important aspects of steganography techniques - picture quality, high data-hiding capacity, secret text security and computational time - the book provides extensive information on four novel image-based steganography approaches that employ JPEG compression. Academics, scientists and engineers engaged in research, development and application of steganography techniques, optimization and data analytics will find the book's comprehensive coverage an invaluable resource.

Emerging Technologies in Data Mining and Information Security
Online Library Jpeg Image Compression Using Discrete Cosine Transform

Exclusively dedicated to Mobile TV, this book provides a detailed insight to mobile multimedia characterized efficient compression techniques, protocols formalized by 3GPP or 3GPP2, capabilities of broadcast, and mobile networks for delivering multimedia content. Network requirements such as spectrum; chipsets, software and handsets which enable multimedia services; delivery platforms and content protection technologies which provide revenue assurance are covered in detail. Written with a global perspective, this book takes a detailed look at the networks deployed worldwide with examples and is rich in diagrams providing extraordinary visualization of the new technologies. * A complete introduction and overview of mobile multimedia, mobile TV, and multimedia networks worldwide * Includes multimedia services for streaming, live TV, downloads, MMS, VoD in the mobile environment * Describes enabling technologies and protocols such as MPEG-4, H.264, AAC+,3GPP-PSS and 3G-324M * Detailed chapters on DVB-H, DMB and 3G technologies for mobile TV * Content security, conditional access and DRM for the mobile world * Handset features for mobile TV and multimedia services

Image Compression Using Discrete Cosine Transform

Still Image Compression on Parallel Computer Architectures investigates the application of parallel-processing techniques to digital image compression. Digital image compression is used to reduce the number of bits required to store an image in computer memory and/or transmit it over a communication link. Over the past decade advancements in technology have spawned many applications of digital imaging, such as photo videotex, desktop publishing, graphics arts, color facsimile, newspaper wire phototransmission and medical imaging. For many other contemporary applications, such as distributed multimedia systems, rapid transmission of images is necessary. Dollar cost as well as time cost of transmission and storage tend to be directly proportional to the volume of data. Therefore, application of digital image compression techniques becomes necessary to minimize costs. A number of digital image compression algorithms have been developed and standardized. With the success of these algorithms, research effort is now directed towards improving implementation techniques. The Joint Photographic Experts Group (JPEG) and Motion Photographic Experts Group (MPEG) are international organizations which have developed digital image compression standards. Hardware (VLSI chips) which implement the JPEG image compression algorithm are available. Such hardware is specific to image compression only and cannot be used for other image processing applications. A flexible means of implementing digital image compression algorithms is still required. An obvious method of processing different imaging applications on general purpose hardware platforms is to develop software implementations. JPEG uses an 8 x 8 block of image samples as the basic element for compression. These blocks are processed sequentially. There is always the possibility of having similar blocks in a given image. If similar blocks in an image are located, then repeated compression of these blocks is not necessary. By locating similar blocks in the image, the speed of compression can be increased and the size of the compressed image can be reduced. Based on this concept an enhancement to the JPEG algorithm is proposed, called Bock Comparator Technique (BCT). Still Image Compression on Parallel Computer Architectures is designed for advanced students and practitioners of computer science. This comprehensive reference provides a foundation for understanding digital image compression techniques and parallel computer architectures.
As technology continues to develop, certain innovations are beginning to cover a wide range of applications, specifically mobile robotic systems. The boundaries between the various automation methods and their implementations are not strictly defined, with overlaps occurring. Specificity is required regarding the research and development of android systems and how they pertain to modern science. Control and Signal Processing Applications For Mobile And Aerial Robotic Systems is a pivotal reference source that provides vital research on the current state of control and signal processing of portable robotic designs. While highlighting topics such as digital systems, control theory, and mathematical methods, this publication explores original inquiry contributions and the instrumentation of mechanical systems in the industrial and scientific fields. This book is ideally designed for technicians, engineers, industry specialists, researchers, academicians, and students seeking current research on today?s execution of mobile robotic schemes.

Embedded System Design of JPEG Image Decompression

Image compression using JPEG algorithm has revolutionized the digital multimedia industry. JPEG based image compressions requires lower bandwidth for transmission and reduce storage disk space. Bitmap Image Format stores the pixel values without any encoding or compression. Hence it has larger size than the JPEG file format. Decompression of JPEG image involves extracting the pixel values using 2-dimensional Inverse Discrete Cosine Transform and de-quantization. The pixel values are in zigzag format in JPEG so they need to be extracted out in the normal format. JPEG header has discrete quantization tables and Huffman tables encoded in it. These tables need to be extracted. Apart from this, bitmap header format extraction and reorganizing them along with the pixel values is needed for converting a jpeg format image to a bmp format image. This project explores the various possible architectures for hardware software co-design. The project implements HardwareSoftware Co-Design using Atmel ATmega32 micro controller as hardware and Visual C++ is used to implement the software part of the project. Hardware software co-design combines the best of both. Software gives the flexibility in design while the hardware guarantees the performance, throughput and efficient operation.

Proceedings of Integrated Intelligence Enable Networks and Computing

This 2-Volume Set, CCIS 0269-CCIS 0270, constitutes the refereed proceedings of the International Conference on Global Trends in Computing and Communication (CCIS 0269) and the International Conference on Global Trends in Information Systems and Software Applications (CCIS 0270), ObCom 2011, held in Vellore, India, in December 2011. The 173 full papers presented together with a keynote paper and invited papers were carefully reviewed and selected from 842 submissions. The conference addresses issues associated with computing, communication and information. Its aim is to increase exponentially the participants' awareness of the current and future direction in the domains and to create a platform between researchers, leading industry developers and end users to interrelate.

Multidisciplinary Approach to Modern Digital Steganography
Online Library Jpeg Image Compression Using Discrete Cosine Transform A

The brand new edition of IMAGE PROCESSING, ANALYSIS, AND MACHINE VISION is a robust text providing deep and wide coverage of the full range of topics encountered in the field of image processing and machine vision. As a result, it can serve undergraduates, graduates, researchers, and professionals looking for a readable reference. The book's encyclopedic coverage of topics is wide, and it can be used in more than one course (both image processing and machine vision classes). In addition, while advanced mathematics is not needed to understand basic concepts (making this a good choice for undergraduates), rigorous mathematical coverage is included for more advanced readers. It is also distinguished by its easy-to-understand algorithm descriptions of difficult concepts, and a wealth of carefully selected problems and examples. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

A NOVEL APPROACH OF AUTHENTICATION USING PIXEL VALUE GRAPHICAL PASSWORD SCHEME

PES College of Engineering is organizing an International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT-12) in Mandya and merging the event with Golden Jubilee of the Institute. The Proceedings of the Conference presents high quality, peer reviewed articles from the field of Electronics, Computer Science and Technology. The book is a compilation of research papers from the cutting-edge technologies and it is targeted towards the scientific community actively involved in research activities.

Advanced Informatics for Computing Research

In this book it is being attempted to implement basic JPEG compression using only basic MATLAB functions. Here we use the lossy compression technique where data loss can not effect the image clarity in this area. JPEG image compression addresses the problem of reducing the amount of data required to represent a digital image. It is also used for reducing the redundancy that is nothing but avoiding the duplicate data. It is also used for reduce the storage compression area to load an image, for this purpose we are using JPEG. This book describes the successful implementation of JPEG image compression by using the MATLAB software.

Optimal Compression Using Discrete Cosine Transformation in Matlab

Telemedicine, which involves electronic communications and software, provides the same clinical services to patients without the requirement of an in-person visit. Essentially, this is considered remote healthcare. Though telemedicine is not a new practice, it has become an increasingly popular form of healthcare delivery due to current events, including the COVID-19 pandemic. Not only are visits being moved onto virtual platforms, but additional materials and correspondence can remain in the digital sphere. Virtual lab results, digital imaging, medical diagnosis, and video consultations are just a few examples that encompass how telemedicine can be used for increased accessibility in healthcare delivery. With telemedicine being used in both the diagnosis and treatment of patients, technology in healthcare can be implemented at almost any phase of the patient experience. As healthcare delivery follows the digital
shift, it is important to understand the technologies, benefits and challenges, and overall impacts of the remote healthcare experience. The Research Anthology on Telemedicine Efficacy, Adoption, and Impact on Healthcare Delivery presents the latest research on best practices for adopting telehealth into medical practices and its efficacy and solutions for the improvement of telemedicine, as well as addresses emerging challenges and opportunities, including issues such as securing patient data and providing healthcare accessibility to rural populations. Covering important themes that include doctor-patient relationships, tele-wound monitoring, and telemedicine regulations, this book is essential for healthcare professionals, doctors, medical students, academic and medical libraries, medical technologists, practitioners, stakeholders, researchers, academicians, and students interested in the emerging technological developments and solutions within the field of telemedicine.

Image Compression Using Discrete Cosine Transform and Discrete Wavelet Transform

This volume constitutes the proceedings of the 5th International Conference on Computer Analysis of Images and Patterns (CAIP’93), held in Budapest, Hungary, in September 1993. Formerly, the events in this biennial conference series were thought as a forum where East European researchers and professionals from academia and industry had an opportunity to discuss their results and ideas with Western colleagues active in image processing and pattern recognition. Now, CAIP’93 has a much more international scope, and in the future these conferences will not any longer take place only in East European countries, but roam throughout whole Europe. Besides invited talks by Belikova, Gimel’Farb, Haralick and Roska, the volume contains 114 contributions, either presented as lectures or posters and carefully selected by a highly competent international program committee from a total of some 230 submissions; thus the book gives a thorough survey on recent research results and their applications in image processing and pattern recognition. The proceedings is organized in 20 sections, for example on image data structures, image processing, edges and contours, Hough transforms and related methods, shape, motion, 3-D vision, character recognition and document processing, biomedical applications, industrial applications, and neural networks.

Emerging Research in Electronics, Computer Science and Technology

This book constitutes the refereed proceedings of the 5th International Conference on Image and Signal Processing, ICISP 2012, held in Agadir, Morocco, in June 2012. The 75 revised full papers presented were carefully reviewed and selected from 158 submissions. The contributions are grouped into the following topical sections: multi/hyperspectral imaging; image iterating and coding; signal processing; biometric; watermarking and texture; segmentation and retrieval; image processing; pattern recognition.

Proceedings of the 11th National Technical Seminar on Unmanned System Technology 2019

Image processing-from basics to advanced applications Learn how to master image processing and compression with this outstanding state-of-the-art reference. From fundamentals to sophisticated applications, Image Processing: Principles
and Applications covers multiple topics and provides a fresh perspective on future directions and innovations in the field, including:

- Image transformation techniques, including wavelet transformation and developments
- Image enhancement and restoration, including noise modeling and filtering
- Segmentation schemes, and classification and recognition of objects
- Texture and shape analysis techniques
- Fuzzy set theoretical approaches in image processing, neural networks, etc.
- Content-based image retrieval and image mining
- Biomedical image analysis and interpretation, including biometrical algorithms such as face recognition and signature verification
- Remotely sensed images and their applications
- Principles and applications of dynamic scene analysis and moving object detection and tracking
- Fundamentals of image compression, including the JPEG standard and the new JPEG2000 standard

Additional features include problems and solutions with each chapter to help you apply the theory and techniques, as well as bibliographies for researching specialized topics. With its extensive use of examples and illustrative figures, this is a superior title for students and practitioners in computer science, wireless and multimedia communications, and engineering.