Super Resolution From Video

Advances in Image and Video TechnologyImage and Video TechnologyIterative-Interpolation Super-Resolution Image ReconstructionSuper Resolution of Images and VideoAdvances in Multimedia Information Processing - PCM 2006Image Mosaicing and Super-resolutionMachine Learning for Human Motion Analysis: Theory and PracticePython Deep Learning CookbookExample-Based Super ResolutionPlasmonics and Super-Resolution ImagingSuper-Resolution ImagingAdvances in Multimedia Information Processing - PCM 2013Fluorescence MicroscopyUnsupervised Video Super-resolution with Temporal Consistency Using GANMotion-Free Super-ResolutionMultimedia Networking and CodingImage Super-Resolution and ApplicationsKnowledge-Based Software EngineeringSuper-Resolution MicroscopyInformation and Communication Technology for Intelligent Systems2020 IEEE International Conference on Multimedia and Expo Workshops (ICMEW)Motion DeblurringA Video Super-Resolution Algorithm Based on CNN and Motion CompensationGlobal Trends in Information Systems and Software ApplicationsMachine Learning RefinedRecent Advances in Multimedia Signal Processing and CommunicationsRecent Advances in Image and Video CodingSuper-Resolution ImagingAdvances in Multimedia Information Processing - PCM 2009Wavelet-based Super-resolution and Video CodingScale Space and Variational Methods in Computer VisionMultidimensional Signal, Image, and Video

Processing and CodingPhotographic Multishot
TechniquesEncyclopedia of MultimediaAdvances in
BiometricsSuper-Resolution ImagingBildverarbeitung
für die Medizin 2014Curves and Surfaces2019 IEEE
CVF International Conference on Computer Vision
(ICCV)Proceedings of the ACM International Workshop
on Video Surveillance & Sensor Networks

Advances in Image and Video Technology

With the exponential increase in computing power
and broad proliferation of digital cameras, super-
resolution imaging is poised to become the next
"killer app." The growing interest in this technology
has manifested itself in an explosion of literature on
the subject. Super-Resolution Imaging consolidates
key recent research contributions from eminent
scholars and practitioners in this area and serves as a
starting point for exploration into the state of the art
in the field. It describes the latest in both theoretical
and practical aspects of direct relevance to academia
and industry, providing a base of understanding for
future progress. Features downloadable tools to
supplement material found in the book Recent
advances in camera sensor technology have led to an
increasingly larger number of pixels being crammed
into ever-smaller spaces. This has resulted in an
overall decline in the visual quality of recorded
content, necessitating improvement of images
through the use of post-processing. Providing a
snapshot of the cutting edge in super-resolution
imaging, this book focuses on methods and
techniques to improve images and video beyond the

capabilities of the sensors that acquired them. It covers: History and future directions of super-resolution imaging Locally adaptive processing methods versus globally optimal methods Modern techniques for motion estimation How to integrate robustness Bayesian statistical approaches Learning-based methods Applications in remote sensing and medicine Practical implementations and commercial products based on super-resolution The book concludes by concentrating on multidisciplinary applications of super-resolution for a variety of fields. It covers a wide range of super-resolution imaging implementation techniques, including variational, feature-based, multi-channel, learning-based, locally adaptive, and nonparametric methods. This versatile book can be used as the basis for short courses for engineers and scientists, or as part of graduate-level courses in image processing.

Image and Video Technology

Iterative-Interpolation Super-Resolution Image Reconstruction

This fully revised and expanded edition gives readers the necessary understanding of image and video processing concepts to contribute to this hot technology's future advances. Important new topics include introductory random processes, image enhancement and analysis, and the new MPEG scalable video coding standard.

Super Resolution of Images and Video

The book gathers papers addressing state-of-the-art research in all areas of Information and Communication Technologies and their applications in intelligent computing, cloud storage, data mining and software analysis. It presents the outcomes of the third International Conference on Information and Communication Technology for Intelligent Systems, which was held on April 6–7, 2018, in Ahmedabad, India. Divided into two volumes, the book discusses the fundamentals of various data analytics and algorithms, making it a valuable resource for researchers' future studies.

Advances in Multimedia Information Processing - PCM 2006

Advances in multimedia communication systems have enhanced the need for improved video coding standards. Due to the inherent nature of video content, large bandwidths and reliable communication links are required to ensure a satisfactory level of quality experience; inspiring industry and research communities to concentrate their efforts in this emerging research area. Multimedia Networking and Coding covers widespread knowledge and research as well as innovative applications in multimedia communication systems. This book highlights recent techniques that can evolve into future multimedia communication systems, also showing experimental results from systems and applications.

Image Mosaicing and Super-resolution

The Distinguished Dissertation Series is published on behalf of the Conference of Professors and Heads of Computing and the British Computer Society, who annually select the best British PhD dissertations in computer science for publication. The dissertations are selected on behalf of the CPHC by a panel of eight academics. Each dissertation chosen makes a noteworthy contribution to the subject and reaches a high standard of exposition, placing all results clearly in the context of computer science as a whole. In this way computer scientists with significantly different interests are able to grasp the essentials - or even find a means of entry - to an unfamiliar research topic. This book investigates how information contained in multiple, overlapping images of a scene may be combined to produce images of superior quality. This offers possibilities such as noise reduction, extended field of view, blur removal, increased spatial resolution and improved dynamic range. Potential applications cover fields as diverse as forensic video restoration, remote sensing, video compression and digital video editing. The book covers two aspects that have attracted particular attention in recent years: image mosaicing, whereby multiple images are aligned to produce a large composite; and super-resolution, which permits restoration at an increased resolution of poor quality video sequences by modelling and removing imaging degradations including noise, blur and spacial-sampling. It contains a comprehensive coverage and analysis of existing techniques, and describes in detail

novel, powerful and automatic algorithms (based on a robust, statistical framework) for applying mosaicing and super-resolution. The algorithms may be implemented directly from the descriptions given here. A particular feature of the techniques is that it is not necessary to know the camera parameters (such as position and focal length) in order to apply them. Throughout the book, examples are given on real image sequences, covering a variety of applications including: the separation of latent marks in forensic images; the automatic creation of 360 panoramic mosaics; and super-resolution restoration of various scenes, text, and faces in lw-quality video.

Machine Learning for Human Motion Analysis: Theory and Practice

Motion-Free Super-Resolution is a compilation of very recent work on various methods of generating super-resolution (SR) images from a set of low-resolution images. The current literature on this topic deals primarily with the use of motion cues for the purpose of generating SR images. These cues have, it is shown, their advantages and disadvantages. In contrast, this book shows that cues other than motion can also be used for the same purpose, and addresses both the merits and demerits of these new techniques. Motion-Free Super-Resolution supersedes much of the lead author's previous edited volume, "Super-Resolution Imaging," and includes an up-to-date account of the latest research efforts in this fast-moving field. This sequel also features a style of presentation closer to that of a textbook, with an

emphasis on teaching and explanation rather than scholarly presentation.

Python Deep Learning Cookbook

This book constitutes the proceedings of the 14th Pacific-Rim Conference on Multimedia, PCM 2013, held in Nanjing, China, in December 2013. The 30 revised full papers and 27 poster papers presented were carefully reviewed and selected from 153 submissions. The papers cover a wide range of topics in the area of multimedia content analysis, multimedia signal processing and communications and multimedia applications and services.

Example-Based Super Resolution

This second edition provides easy access to important concepts, issues and technology trends in the field of multimedia technologies, systems, techniques, and applications. Over 1,100 heavily-illustrated pages — including 80 new entries — present concise overviews of all aspects of software, systems, web tools and hardware that enable video, audio and developing media to be shared and delivered electronically.

Plasmonics and Super-Resolution Imaging

This book is devoted to the issue of image super-resolution-obtaining high-resolution images from single or multiple low-resolution images. Although there are numerous algorithms available for image

interpolation and super-resolution, there's been a need for a book that establishes a common thread between the two processes. Filling this need, Image

Super-Resolution Imaging

Authors Katsaggelos, Molina, and Mateos present in a systematic way the building blocks of the Bayesian framework, which is also used as a reference in reviewing and comparing Super Resolution (SR) approaches which have appeared in the literature. This work should serve as a reference to the graduate student who would like to work in this area, to the practicing engineer, and scientists applying some of the tools and results to other related problems.The authors present a case that there is a strong relationship between the tools and techniques developed for SR and a number of other inverse problems encountered in signal processing (e.g., image restoration, and motion estimation). SR techniques can also be an integral part of an image and video codec and they can drive the development of new coder-decoders (codecs) and standards.

Advances in Multimedia Information Processing - PCM 2013

We welcome you to the Third Paci?c-Rim Symposium on Image and Video Technology (PSIVT 2009), sponsored by the National Institute of Informatics, MicrosoftResearch,and the Forumfor ImageInformaticsin Japan.PSIVT 2009 washeldinTokyo ,Japan,duringJanuary13–16.Themainconferencecompri

sed eight major themes spanning the ?eld of image and video technology, namely, image sensors and multimedia hardware, graphics and visualization, image and video analysis, recognition and retrieval, multi-view imaging and processing, computer vision applications, video communications and networking, and m- timedia processing. To heighten interest and participation, PSIVT also included workshops, tutorials, demonstrations and invited talks, in addition to the tra- tional technical presentations. For the technical program of PSIVT 2009, a total of 247 paper submissions underwent a full review process. Each of these submissions was evaluated in a double-blind manner by a minimum of three reviewers. The review assignments were determined by a set of two to four Chairs for each of the eight themes. Final decisions were jointly made by the Theme Chairs, with some adjustments by the Program Chairs in an e?ort to balance the quality of papers among the themes and to emphasize novelty. Rejected papers with signi?cant discrepancies in review evaluations received consolidation reports explaining the decisions.

Fluorescence Microscopy

To my wife, Mitu - Vivek Bannore Preface Preface In many imaging systems, under-sampling and aliasing occurs frequently leading to degradation of image quality. Due to the limited number of sensors available on the digital cameras, the quality of images captured is also limited. Factors such as optical or atmospheric blur and sensor noise can also contribute further to the d- radation of image quality. Super-

Resolution is an image reconstruction technique that enhances a sequence of low-resolution images or video frames by increasing the spatial resolution of the images. Each of these low-resolution images contain only incomplete scene information and are geometrically warped, aliased, and - der-sampled. Super-resolution technique intelligently fuses the incomplete scene information from several consecutive low-resolution frames to reconstruct a hi-resolution representation of the original scene. In the last decade, with the advent of new technologies in both civil and mi- tary domain, more computer vision applications are being developed with a demand for high-quality high-resolution images. In fact, the demand for high- resolution images is exponentially increasing and the camera manufacturing te- nology is unable to cope up due to cost efficiency and other practical reasons.

Unsupervised Video Super-resolution with Temporal Consistency Using GAN

Photographers are just beginning to realize the potential of high dynamic range imaging (HDRI). Now, the newest techniques based on a bracketed series of exposures make it possible to go beyond HDRI: photographers can increase resolution for ultra-sharp, detailed images, and they can extend the depth of field in a way that was never before possible. Photographic Multishot Techniques provides a thorough introduction and is a hands-on guide to these various techniques. Using a series of example images, the authors explain and illustrate the use of

each technique. Included are lessons on HDRI, super-resolution, focus stacking, and stitching images. Moreover, the reader will learn how to effectively combine these various techniques to create amazing images. Throughout the book, the authors use tools such as Photoshop, PhotoAcute, Photomatix Pro, FDRTools, CombineZM, DOP Detail Extractor, and Helicon Focus to illustrate the workflow with detailed, step-by-step instructions. Most of these tools offer free trial versions that are available for download at the Rocky Nook Website at the book description of "Photographic Multishot Techniques". Learning to use these cutting-edge techniques is sure to expand the repertoire and improve the photographic skills of the professional, as well as the advanced amateur, photographer.

Motion-Free Super-Resolution

"This book highlights the development of robust and effective vision-based motion understanding systems, addressing specific vision applications such as surveillance, sport event analysis, healthcare, video conferencing, and motion video indexing and retrieval"--Provided by publisher.

Multimedia Networking and Coding

An intuitive approach to machine learning covering key concepts, real-world applications, and practical Python coding exercises.

Image Super-Resolution and Applications

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.

Knowledge-Based Software Engineering

Curves and Surfaces provides information pertinent to the fundamental aspects of approximation theory with emphasis on approximation of images, surface compression, wavelets, and tomography. This book covers a variety of topics, including error estimates for multiquadratic interpolation, spline manifolds, and vector spline approximation. Organized into 77 chapters, this book begins with an overview of the method, based on a local Taylor expansion of the final curve, for computing the parameter values. This text then presents a vector approximation based on general spline function theory. Other chapters consider a nonparametric technique for estimating under random censorship the amplitude of a change

point in change point hazard models. This book discusses as well the algorithm for ray tracing rational parametric surfaces based on inversion and implicitization. The final chapter deals with the results concerning the norm of the interpolation operator and error estimates for a square domain. This book is a valuable resource for mathematicians.

Super-Resolution Microscopy

This book constitutes the proceedings of the 10th Pacific Rim Conference on Multimedia, held in Bangkok, Thailand during December 15-18, 2009. The papers presented in the volume were carefully reviewed and selected from 171 submissions. The topics covered are exploring large-scale videos:automatic content genre classification, repair, enhancement and authentication, human behavior classification and recognition, image and video coding perceptual quality improvement, image annotation, retrieval, and classification, object detection and tracking, networking technologies, audio processing, 3DTV and mulit-view video, image watermarking, multimedia document search and retrieval, intelligent multimedia security and forensics, multimedia content management, image analysis and matching, coding, advanced image processing techniques, multimedia compressioin and optimization, multimedia security rights and management.

Information and Communication Technology for Intelligent Systems

This book constitutes the thoroughly refereed post-conference proceedings of the 6th Pacific Rim Symposium on Image and Video Technology, PSIVT 2013, held in Guanajuato, México in October/November 2013. The total of 43 revised papers was carefully reviewed and selected from 90 submissions. The papers are organized in topical sections on image/video processing and analysis, image/video retrieval and scene understanding, applications of image and video technology, biomedical image processing and analysis, biometrics and image forensics, computational photography and arts, computer and robot vision, pattern recognition and video surveillance.

2020 IEEE International Conference on Multimedia and Expo Workshops (ICMEW)

The rapid increase in computing power and communication speed, coupled with computer storage facilities availability, has led to a new age of multimedia app- cations. Multimedia is practically everywhere and all around us we can feel its presence in almost all applications ranging from online video databases, IPTV, - teractive multimedia and more recently in multimedia based social interaction. These new growing applications require high-quality data storage, easy access to multimedia content and reliable delivery. Moving ever closer to commercial - ployment also aroused a higher awareness of security and intellectual property management issues. All the aforementioned

requirements resulted in higher demands on various - eas of research (signal processing, image/video processing and analysis, com- nication protocols, content search, watermarking, etc.). This book covers the most prominent research issues in multimedia and is divided into four main sections: i) content based retrieval, ii) storage and remote access, iii) watermarking and co- right protection and iv) multimedia applications. Chapter 1 of the first section presents an analysis on how color is used and why is it crucial in nowadays multimedia applications. In chapter 2 the authors give an overview of the advances in video abstraction for fast content browsing, transm- sion, retrieval and skimming in large video databases and chapter 3 extends the discussion on video summarization even further. Content retrieval problem is tackled in chapter 4 by describing a novel method for producing meaningful s- ments suitable for MPEG-7 description based on binary partition trees (BPTs).

Motion Deblurring

A Video Super-Resolution Algorithm Based on CNN and Motion Compensation

This unique book on super-resolution microscopy techniques presents comparative, in-depth analyses of the strengths and weaknesses of the individual approaches. It was written for non-experts who need to understand the principles of super-resolution or who wish to use recently commercialized instruments

as well as for professionals who plan to realize novel microscopic devices. Explaining the practical requirements in terms of hardware, software and sample preparation, the book offers a wealth of hands-on tips and practical tricks to get a setup running, provides invaluable help and support for successful data acquisition and specific advice in the context of data analysis and visualization. Furthermore, it addresses a wide array of transdisciplinary fields of applications. The author begins by outlining the joint efforts that have led to achieving super-resolution microscopy combining advances in single-molecule photo-physics, fluorophore design and fluorescent labeling, instrument design and software development. The following chapters depict and compare current main standard techniques such as structured illumination microscopy, single-molecule localization, stimulated emission depletion microscopy and multi-scale imaging including light-sheet and expansion microscopy. For each individual approach the experimental setups are introduced, the imaging protocols are provided and the various applications illustrated. The book concludes with a discussion of future challenges addressing issues of routine applications and further commercialization of the available methods. Guiding users in how to make choices for the design of their own experiments from scratch to promising application, this one-stop resource is intended for researchers in the applied sciences, from chemistry to biology and medicine to physics and engineering.

Global Trends in Information Systems

and Software Applications

This book constitutes the refereed proceedings of the International Conference on Biometrics, ICB 2007, held in Seoul, Korea, August 2007. Biometric criteria covered by the papers are assigned to face, fingerprint, iris, speech and signature, biometric fusion and performance evaluation, gait, keystrokes, and others. In addition, the volume also announces the results of the Face Authentication Competition, FAC 2006.

Machine Learning Refined

Fluorescence Microscopy: Super-Resolution and other Novel Techniques delivers a comprehensive review of current advances in fluorescence microscopy methods as applied to biological and biomedical science. With contributions selected for clarity, utility, and reproducibility, the work provides practical tools for investigating these ground-breaking developments. Emphasizing super-resolution techniques, light sheet microscopy, sample preparation, new labels, and analysis techniques, this work keeps pace with the innovative technical advances that are increasingly vital to biological and biomedical researchers. With its extensive graphics, inter-method comparisons, and tricks and approaches not revealed in primary publications, Fluorescence Microscopy encourages readers to both understand these methods, and to adapt them to other systems. It also offers instruction on the best visualization to derive quantitative information about cell biological

structure and function, delivering crucial guidance on best practices in related laboratory research. Presents a timely and comprehensive review of novel techniques in fluorescence imaging as applied to biological and biomedical research Offers insight into common challenges in implementing techniques, as well as effective solutions

Recent Advances in Multimedia Signal Processing and Communications

This book constitutes the refereed proceedings of the 11th Joint Conference on Knowledge-Based Software-Engineering, JCKBSE 2014, held in Volgograd, Russia, in September 2014. The 59 full and 3 short papers presented were carefully reviewed and selected from 197 submissions. The papers are organized in topical sections on methodology and tools for knowledge discovery and data mining; methods and tools for software engineering education; knowledge technologies for semantic web and ontology engineering; knowledge-based methods and tools for testing, verification and validation, maintenance and evolution; natural language processing, image analysis and recognition; knowledge-based methods and applications in information security, robotics and navigation; decision support methods for software engineering; architecture of knowledge-based systems, including intelligent agents and softbots; automating software design and synthesis; knowledge management for business processes, workflows and enterprise modeling; knowledge-based methods and applications in bioscience, medicine and justice;

knowledge-based requirements engineering, domain analysis and modeling; intelligent user interfaces and human-machine interaction; lean software engineering; program understanding, programming knowledge, modeling programs and programmers.

Recent Advances in Image and Video Coding

Comprehensive guide to the restoration of images degraded by motion blur, encompassing algorithms and architectures, with novel computational photography methods.

Super-Resolution Imaging

With the exponential increase in computing power and broad proliferation of digital cameras, super-resolution imaging is poised to become the next "killer app." The growing interest in this technology has manifested itself in an explosion of literature on the subject. Super-Resolution Imaging consolidates key recent research contributions from eminent scholars and practitioners in this area and serves as a starting point for exploration into the state of the art in the field. It describes the latest in both theoretical and practical aspects of direct relevance to academia and industry, providing a base of understanding for future progress. Features downloadable tools to supplement material found in the book Recent advances in camera sensor technology have led to an increasingly larger number of pixels being crammed into ever-smaller spaces. This has resulted in an

overall decline in the visual quality of recorded content, necessitating improvement of images through the use of post-processing. Providing a snapshot of the cutting edge in super-resolution imaging, this book focuses on methods and techniques to improve images and video beyond the capabilities of the sensors that acquired them. It covers: History and future directions of super-resolution imaging Locally adaptive processing methods versus globally optimal methods Modern techniques for motion estimation How to integrate robustness Bayesian statistical approaches Learning-based methods Applications in remote sensing and medicine Practical implementations and commercial products based on super-resolution The book concludes by concentrating on multidisciplinary applications of super-resolution for a variety of fields. It covers a wide range of super-resolution imaging implementation techniques, including variational, feature-based, multi-channel, learning-based, locally adaptive, and nonparametric methods. This versatile book can be used as the basis for short courses for engineers and scientists, or as part of graduate-level courses in image processing.

Advances in Multimedia Information Processing - PCM 2009

This book constitutes the refereed proceedings of the Second International Conference on Scale Space Methods and Variational Methods in Computer Vision, SSVM 2009, emanated from the joint edition of the 5th International Workshop on Variational, Geometric

Page 20/28

and Level Set Methods in Computer Vision, VLSM 2009 and the 7th International Conference on Scale Space and PDE Methods in Computer Vision, Scale-Space 2009, held in Voss, Norway in June 2009. The 71 revised full papers presented were carefully reviewed and selected numerous submissions. The papers are organized in topical sections on segmentation and detection; image enhancement and reconstruction; motion analysis, optical flow, registration and tracking; surfaces and shapes; scale space and feature extraction.

Wavelet-based Super-resolution and Video Coding

Example-Based Super Resolution provides a thorough introduction and overview of example-based super resolution, covering the most successful algorithmic approaches and theories behind them with implementation insights. It also describes current challenges and explores future trends. Readers of this book will be able to understand the latest natural image patch statistical models and the performance limits of example-based super resolution algorithms, select the best state-of-the-art algorithmic alternative and tune it for specific use cases, and quickly put into practice implementations of the latest and most successful example-based super-resolution methods. Provides detailed coverage of techniques and implementation details that have been successfully introduced in diverse and demanding real-world applications Covers a wide variety of machine learning approaches, ranging from cross-scale self-

similarity concepts and sparse coding, to the latest advances in deep learning Presents a statistical interpretation of the subspace of natural image patches that transcends super resolution and makes it a valuable source for any researcher on image processing or low-level vision

Scale Space and Variational Methods in Computer Vision

Multimedia technologies, systems and applications for both research and development of communications, circuits and systems, computer, and signal processing communities

Multidimensional Signal, Image, and Video Processing and Coding

Photographic Multishot Techniques

Plasmonics is an emerging field mainly developed within the past two decades. Due to its unique capabilities to manipulate light at deep subwavelength scales, plasmonics has been commonly treated as the most important part of nanophotonics. Plasmonic-assisted optical microscopy techniques, especially super-resolution microscopy, have shown tremendous potential and attracted much attention. This book aims to collect cutting-edge studies in various optical imaging technologies with advanced performances that are enabled or enhanced by plasmonics. The basic working principles,

development details, and potential future direction and perspectives are discussed. Edited by Zhaowei Liu, a prominent researcher in the field of super-resolution microscopy, this book will be an excellent reference for anyone in the field of nanophotonics, plasmonics, and optical microscopy.

Encyclopedia of Multimedia

Early Vision and Sensors Color, Illumination and Texture Segmentation and Grouping Motion and Tracking Stereo and Structure from Motion Image Based Modeling Physics Based Modeling Statistical Methods and Learning in Vision Video Surveillance and Monitoring Object, Event and Scene Recognition Vision Based Graphics Image and Video Retrieval Performance Evaluation Applications

Advances in Biometrics

In den letzten Jahren hat sich der Workshop "Bildverarbeitung für die Medizin" durch erfolgreiche Veranstaltungen etabliert. Ziel ist auch 2014 wieder die Darstellung aktueller Forschungsergebnisse und die Vertiefung der Gespräche zwischen Wissenschaftlern, Industrie und Anwendern. Die Beiträge dieses Bandes - einige davon in englischer Sprache - umfassen alle Bereiche der medizinischen Bildverarbeitung, insbesondere Bildgebung und -akquisition, Molekulare Bildgebung, Visualisierung und Animation, Bildsegmentierung und -fusion, Anatomische Atlanten, Zeitreihenanalysen, Biomechanische Modellierung, Klinische Anwendung

computerunterstützter Systeme, Validierung und
Qualitätssicherung u.v.m.

Super-Resolution Imaging

Solve different problems in modelling deep neural
networks using Python, Tensorflow, and Keras with
this practical guide About This Book Practical recipes
on training different neural network models and
tuning them for optimal performance Use Python
frameworks like TensorFlow, Caffe, Keras, Theano for
Natural Language Processing, Computer Vision, and
more A hands-on guide covering the common as well
as the not so common problems in deep learning
using Python Who This Book Is For This book is
intended for machine learning professionals who are
looking to use deep learning algorithms to create real-
world applications using Python. Thorough
understanding of the machine learning concepts and
Python libraries such as NumPy, SciPy and scikit-learn
is expected. Additionally, basic knowledge in linear
algebra and calculus is desired. What You Will Learn
Implement different neural network models in Python
Select the best Python framework for deep learning
such as PyTorch, Tensorflow, MXNet and Keras Apply
tips and tricks related to neural networks internals, to
boost learning performances Consolidate machine
learning principles and apply them in the deep
learning field Reuse and adapt Python code snippets
to everyday problems Evaluate the cost/benefits and
performance implication of each discussed solution In
Detail Deep Learning is revolutionizing a wide range
of industries. For many applications, deep learning

has proven to outperform humans by making faster
and more accurate predictions. This book provides a
top-down and bottom-up approach to demonstrate
deep learning solutions to real-world problems in
different areas. These applications include Computer
Vision, Natural Language Processing, Time Series, and
Robotics. The Python Deep Learning Cookbook
presents technical solutions to the issues presented,
along with a detailed explanation of the solutions.
Furthermore, a discussion on corresponding pros and
cons of implementing the proposed solution using one
of the popular frameworks like TensorFlow, PyTorch,
Keras and CNTK is provided. The book includes
recipes that are related to the basic concepts of
neural networks. All techniques s, as well as classical
networks topologies. The main purpose of this book is
to provide Python programmers a detailed list of
recipes to apply deep learning to common and not-so-
common scenarios. Style and approach Unique blend
of independent recipes arranged in the most logical
manner

Bildverarbeitung für die Medizin 2014

Super-Resolution Imaging serves as an essential
reference for both academicians and practicing
engineers. It can be used both as a text for advanced
courses in imaging and as a desk reference for those
working in multimedia, electrical engineering,
computer science, and mathematics. The first book to
cover the new research area of super-resolution
imaging, this text includes work on the following
groundbreaking topics: Image zooming based on

wavelets and generalized interpolation; Super-resolution from sub-pixel shifts; Use of blur as a cue; Use of warping in super-resolution; Resolution enhancement using multiple apertures; Super-resolution from motion data; Super-resolution from compressed video; Limits in super-resolution imaging. Written by the leading experts in the field, Super-Resolution Imaging presents a comprehensive analysis of current technology, along with new research findings and directions for future work.

Curves and Surfaces

2019 IEEE CVF International Conference on Computer Vision (ICCV)

This book constitutes the refereed proceedings of the 7th Pacific Rim Conference on Multimedia, PCM 2006, held in Hangzhou, China in November 2006. The 116 revised papers presented cover a wide range of topics, including all aspects of multimedia, both technical and artistic perspectives and both theoretical and practical issues.

Proceedings of the ACM International Workshop on Video Surveillance & Sensor Networks

This book is intended to attract the attention of practitioners and researchers in academia and industry interested in challenging paradigms of image and video coding algorithms with an emphasis on

recent technological developments. All the chapters are well demonstrated by various researchers around the world covering the field of image and video processing. This book highlights the current research in the image and video processing area such as image fusion, image segmentation and classification, image compression, machine vision algorithms and video compression. The entire work available in the book is mainly focusing on researchers who can do quality research in the area of image and video processing and related fields. Each chapter is an independent research which will definitely motivate the young researchers to ponder into. These eleven chapters available in five sections will be an eye-opener for all who are doing systematic research in these fields.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION