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Object-Based Image Analysis Spatial Concepts for Knowledge-Driven Remote Sensing Applications Springer Science & Business Media **This book brings together a collection of invited interdisciplinary persp- tives on the recent topic of Object-based Image Analysis (OBIA). Its c- st tent is based on select papers from the 1 OBIA International Conference held in Salzburg in July 2006, and is enriched by several invited chapters. All submissions have passed through a blind peer-review process resulting in what we believe is a timely volume of the highest scientific, theoretical and technical standards. The concept of OBIA first gained widespread interest within the GIScience (Geographic Information Science) community circa 2000, with the advent of the first commercial software for what was then termed 'obje- oriented image analysis'. However, it is widely agreed that OBIA builds on older segmentation, edge-detection and classification concepts that have been used in remote sensing image analysis for several decades. Nevert- less, its emergence has provided a new critical bridge to spatial concepts applied in multiscale landscape analysis, Geographic Information Systems (GIS) and the synergy between image-objects and their radiometric char- teristics and analyses in Earth Observation data (EO). Object-Based Image Analysis Spatial Concepts for Knowledge-Driven Remote Sensing Applications** Springer **This book brings together a collection of invited interdisciplinary persp- tives on the recent topic of Object-based Image Analysis (OBIA). Its c- st tent is based on select papers from the 1 OBIA International Conference held in Salzburg in July 2006, and is enriched by several invited chapters. 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At the same time, those readers who are already practitioners in the field will gain through the advanced and/or updated tools and new materials and state-of-the-art developments included. This volume provides an accounting of the diversity of current and emergent approaches, not available elsewhere despite the many excellent journals and te- books that exist. Most of the chapters are original, some few are reprints from the Journal of Geographical Systems, Geographical Analysis, The Review of Regional Studies and Letters of Spatial and Resource Sciences. We let our contributors - velop, from their particular perspective and insights, their own strategies for m- ping the part of terrain for which they were responsible. As the chapters were submitted, we became the first consumers of the project we had initiated. We gained from depth, breadth and distinctiveness of our contributors' insights and, in particular, the presence of links between them. High Spatial Resolution Remote Sensing Data, Analysis, and Applications** CRC Press **High spatial resolution data including those from satellite, manned aircraft, and unmanned aerial vehicle (UAV) platforms provide a novel data source for addressing environmental questions with an unprecedented level of detail. To effectively utilize information contained in high spatial resolution imagery, some key questions must be addressed, including: (1) what are the challenges of using new sensors and new platforms? (2) what are the cutting-edge methods for fine-level information extraction from high spatial resolution images? and (3) how can high spatial resolution data improve the quantification and characterization of physical-environmental or human patterns and processes? The chapters in this book provide a snapshot of cutting-edge high spatial resolution remote sensing image collection, preprocessing, processing, and applications. This book intents to provide a useful benchmark for the high spatial resolution remote sensing community and inspire more studies that would address important scientific and technical challenges in use of high spatial remote sensing. Global Urban Monitoring and Assessment through Earth Observation** CRC Press **Cities and towns are the original producers of many of the global environmental problems related to waste disposal, and air and water pollution. There is a rapidly growing need for technologies that will enable monitoring of the world's natural resources and urban assets, and managing exposure to natural and man-made risks. The Group on Earth Observation (GEO) calls for strengthening the cooperation and coordination among global observing systems and research programs. Global Urban Monitoring and Assessment through Earth Observation introduces this important international collaborative effort, reviews the current state of global urban remote sensing, and expands on future directions in the field. The book reviews the current state of global urban monitoring, assessment, modeling, and prediction through Earth observation and related technologies. It then introduces GEO's important international collaborative effort—Global Urban Observation and Information Task—and the current state of global urban remote sensing and future directions. It explores groundbreaking work in urban remote sensing and examines how it could contribute to the development of innovative concepts and techniques for sustainable urban development. Despite significant progress in recent years, there remain substantial gaps in ongoing national, regional, and global efforts to address environmental challenges. Edited by a well-known expert in the field of remote sensing, GIS, and other geospatial technologies, this book addresses the gaps in an effective and long-term manner, highlighting the importance of increased coordination and networking among major stakeholders and of working together with other key international mechanisms. Drawing on the expertise of pioneers in the field from across the globe, the book details emerging research in the theory, methods, and techniques of urban remote sensing that provide insight into how to solve the major issues of sustainable development—one of the most important issues facing society in the future. Computational Modelling of Objects Represented in Images III Fundamentals, Methods and Applications** CRC Press **Computational Modelling of Objects Represented in Images: Fundamentals, Methods and Applications III contains all contributions presented at the International Symposium CompIMAGE 2012 - Computational Modelling of Object Presented in Images: Fundamentals, Methods and Applications (Rome, Italy, 5-7 September 2012). The contributions cover the state-o Multispectral Image Analysis Using the Object-Oriented Paradigm** CRC Press **Bringing a fresh new perspective to remote sensing, object-based image analysis is a paradigm shift from the traditional pixel-based approach. Featuring various practical examples to provide understanding of this new modus operandi, Multispectral Image Analysis Using the Object-Oriented Paradigm reviews the current image analysis methods and demonstrates advantages to improve information extraction from imagery. This reference describes traditional image analysis techniques, introduces object-oriented technology, and discusses the benefits of object-based versus pixel-based classification. It examines the creation of object primitives using image segmentation approaches and the use of various techniques for object classification. The author covers image enhancement methods, how to use ancillary data to constrain image segmentation, and concepts of semantic grouping of objects. He concludes by addressing accuracy assessment approaches. The accompanying downloadable resources present sample data that enable the use of different approaches to problem solving. Integrating remote sensing techniques and GIS analysis, Multispectral Image Analysis Using the Object-Oriented Paradigm distills new tools to extract information from remotely sensed data. Image Segmentation** BoD – Books on Demand **It was estimated that 80% of the information received by human is visual. Image processing is evolving fast and continually. During the past 10 years, there has been a significant research increase in image segmentation. To study a specific object in an image, its boundary can be highlighted by an image segmentation procedure. The objective of the image segmentation is to simplify the representation of pictures into meaningful information by partitioning into image regions. Image segmentation is a technique to locate certain objects or boundaries within an image. There are many algorithms and techniques have been developed to solve image segmentation problems, the research topics in this book such as level set, active contour, AR time series image modeling, Support Vector Machines, Pixon based image segmentations, region similarity metric based technique, statistical ANN and JSEG algorithm were written in details. This book brings together many different aspects of the current research on several fields associated to digital image segmentation. Four parts allowed gathering the 27 chapters around the following topics: Survey of Image Segmentation Algorithms, Image Segmentation methods, Image Segmentation Applications and Hardware Implementation. The readers will find the contents in this book enjoyable and get many helpful ideas and overviews on their own study. Remote Sensing Image Analysis: Including the Spatial Domain** Springer Science & Business Media **Remote Sensing image analysis is mostly done using only spectral information on a pixel by pixel basis. Information captured in neighbouring cells, or information about patterns surrounding the pixel of interest often provides useful supplementary information. This book presents a wide range of innovative and advanced image processing methods for including spatial information, captured by neighbouring pixels in remotely sensed images, to improve image interpretation or image classification. Presented methods include different types of variogram analysis, various methods for texture quantification, smart kernel operators, pattern recognition techniques, image segmentation methods, sub-pixel methods, wavelets and advanced spectral mixture analysis techniques. Apart from explaining the working methods in detail a wide range of applications is presented covering land cover and land use mapping, environmental applications such as heavy metal**

pollution, urban mapping and geological applications to detect hydrocarbon seeps. The book is meant for professionals, PhD students and graduates who use remote sensing image analysis, image interpretation and image classification in their work related to disciplines such as geography, geology, botany, ecology, forestry, cartography, soil science, engineering and urban and regional planning. Remotely Sensed Data Characterization, Classification, and Accuracies CRC Press A volume in the Remote Sensing Handbook series, Remotely Sensed Data Characterization, Classification, and Accuracies documents the scientific and methodological advances that have taken place during the last 50 years. The other two volumes in the series are Land Resources Monitoring, Modeling, and Mapping with Remote Sensing, and Remote Sensing of Remote Sensing Handbook - Three Volume Set CRC Press A volume in the three-volume Remote Sensing Handbook series, Remote Sensing of Water Resources, Disasters, and Urban Studies documents the scientific and methodological advances that have taken place during the last 50 years. The other two volumes in the series are Remotely Sensed Data Characterization, Classification, and Accuracies, and Land Reso Remote Sensing of Wetlands Applications and Advances CRC Press Effectively Manage Wetland Resources Using the Best Available Remote Sensing TechniquesUtilizing top scientists in the wetland classification and mapping field, Remote Sensing of Wetlands: Applications and Advances covers the rapidly changing landscape of wetlands and describes the latest advances in remote sensing that have taken place over the pa GeoComputational Analysis and Modeling of Regional Systems Springer The contributed volume collects cutting-edge research in GeoComputational Analysis of Regional Systems. The contributions emphasize methodological innovations or substantive breakthroughs on many facets of the socio-economic and environmental reality of regional contexts. Earth Observation for Land and Emergency Monitoring John Wiley & Sons Earth Observation Science (EOS) is the study of the global Earth land-ocean-atmosphere system through observations. The principal tools for such studies are measurements from space since these provide the coverage of the planet that is necessary to capture the behaviour of the entire coupled system. In addition, surface observations, and measurements from aircraft, balloons and sounding rockets provide valuable contributors to what are now termed "integrated, global observing systems." Coupled with models, the EOS measurement suites provide powerful tools for research into the factors controlling and changing the Earth system in which we live. The objectives of this book are to describe new methods and applications of satellite technology in the fields of land and emergency monitoring. It draws on new research outcomes from the European FP7 project GIONET (European Centre of Excellence in Earth Observation Research Training). GIONET combines industrial partners with universities and research institutes, and this book provides a perspective on Earth Observation applications that is motivated by the cross-fertilisation of both sectors. Hence, this book will find readers in both industry and academia. This book highlights a broad range of innovative uses of Earth Observation technology to support environmental management, decision making, crisis management and climate policies. It uses advanced concepts of multi-sensor image integration, multi-temporal analysis and synergies between data and models. This is a truly interdisciplinary subject that encompasses a range of applications in various fields which are discussed in detail throughout the text. If you are interested in remote sensing applications and looking for inspiration, this is the book for you. Image Processing: Concepts, Methodologies, Tools, and Applications Concepts, Methodologies, Tools, and Applications IGI Global Advancements in digital technology continue to expand the image science field through the tools and techniques utilized to process two-dimensional images and videos. Image Processing: Concepts, Methodologies, Tools, and Applications presents a collection of research on this multidisciplinary field and the operation of multi-dimensional signals with systems that range from simple digital circuits to computers. This reference source is essential for researchers, academics, and students in the computer science, computer vision, and electrical engineering fields. Whole Slide Imaging Current Applications and Future Directions Springer Nature This book provides up-to-date and practical knowledge in all aspects of whole slide imaging (WSI) by experts in the field. This includes a historical perspective on the evolution of this technology, technical aspects of making a great whole slide image, the various applications of whole slide imaging and future applications using WSI for computer-aided diagnosis The goal is to provide practical knowledge and address knowledge gaps in this emerging field. This book is unique because it addresses an emerging area in pathology for which currently there is only limited information about the practical aspects of deploying this technology. For example, there are no established selection criteria for choosing new scanners and a knowledge base with the key information. The authors of the various chapters have years of real-world experience in selecting and implementing WSI solutions in various aspects of pathology practice. This text also discusses practical tips and pearls to address the selection of a WSI vendor, technology details, implementing this technology and provide an overview of its everyday uses in all areas of pathology. Chapters include important information on how to integrate digital slides with laboratory information system and how to streamline the "digital workflow" with the intent of saving time, saving money, reducing errors, improving efficiency and accuracy, and ultimately benefiting patient outcomes. Whole Slide Imaging: Current Applications and Future Directions is designed to present a comprehensive and state-of the-art approach to WSI within the broad area of digital pathology. It aims to give the readers a look at WSI with a deeper lens and also envision the future of pathology imaging as it pertains to WSI and associated digital innovations. Deep Learning for Image Processing Applications IOS Press Deep learning and image processing are two areas of great interest to academics and industry professionals alike. The areas of application of these two disciplines range widely, encompassing fields such as medicine, robotics, and security and surveillance. The aim of this book, 'Deep Learning for Image Processing Applications', is to offer concepts from these two areas in the same platform, and the book brings together the shared ideas of professionals from academia and research about problems and solutions relating to the multifaceted aspects of the two disciplines. The first chapter provides an introduction to deep learning, and serves as the basis for much of what follows in the subsequent chapters, which cover subjects including: the application of deep neural networks for image classification; hand gesture recognition in robotics; deep learning techniques for image retrieval; disease detection using deep learning techniques; and the comparative analysis of deep data and big data. The book will be of interest to all those whose work involves the use of deep learning and image processing techniques. The ArcGIS Imagery Book New View, New Vision ESRI Press A conceptual introduction and practical primer to the application of imagery and remote sensing data in GIS (geographic information systems). Drones Applications BoD – Books on Demand Drone technologies have constantly been developing for over 100 years. The latest models exhibit a previously unseen set of specifications available to the end users. The collective effort of distinguished international researchers, within the field of drone technologies, has been incorporated into this textbook suitable to the broader audience. The book has been edited by Prof. George Dekoulis, Aerospace Engineering Institute (AEI), Cyprus, an expert on state-of-the-art implementations of reconfigurable space engineering systems. The book consists of four main sections, namely, "Introduction," "Drone History," "Drone Design," and "Drone Applications." We hope this book will be beneficial to professionals, researchers, and academicians and, moreover, to inspire the younger generations into pursuing relevant academic studies and professional careers within the drone industry. Scale Issues in Remote Sensing John Wiley & Sons Provides up-to-date developments in the field of remote sensing by assessing scale issues in land surface, properties, patterns, and processes Scale is a fundamental and crucial issue in remote sensing studies and image analysis. GIS and remote sensing scientists use various scaling techniques depending on the types of remotely sensed images and geospatial data used. Scaling techniques affect image analysis such as object identification and change detection. This book offers up-to-date developments, methods, and techniques in the field of GIS and remote sensing and features articles from internationally renowned authorities on three interrelated perspectives of scaling issues: scale in land surface properties, land surface patterns, and land surface processes. It also visits and reexamines the fundamental theories of scale and scaling by well-known experts who have done substantial research on the topics. Edited by a prominent authority in the geographic information science community, Scale Issues in Remote Sensing: Offers an extensive examination of the fundamental theories of scale issues along with current scaling techniques Studies scale issues from three interrelated perspectives: land surface properties, patterns, and processes Addresses the impact of new frontiers in Earth observation technology (high-resolution, hyperspectral, Lidar sensing, and their synergy with existing technologies) and advances in remote sensing imaging science (object-oriented image analysis and data fusion) Prospects emerging and future trends in remote sensing and their relationship with scale Scale Issues in Remote Sensing is ideal as a professional reference for practicing geographic information scientists and remote sensing engineers as well as supplemental reading for graduate level students. Landslide Science and Practice Volume 1: Landslide Inventory and Susceptibility and Hazard Zoning Springer Science & Business Media This book contains peer-reviewed papers from the Second World Landslide Forum, organised by the International Consortium on Landslides (ICL), that took place in September 2011. The entire material from the conference has been split into seven volumes, this one is the first: 1. Landslide Inventory and Susceptibility and Hazard Zoning, 2. Early Warning, Instrumentation and Monitoring, 3. Spatial Analysis and Modelling, 4. Global Environmental Change, 5. Complex Environment, 6. Risk Assessment, Management and Mitigation, 7. Social and Economic Impact and Policies. Urban Informatics Springer Nature This open access book is the first to systematically introduce the principles of urban informatics and its application to every aspect of the city that involves its functioning, control, management, and future planning. It introduces new models and tools being developed to understand and implement these technologies that enable cities to function more efficiently – to become 'smart' and 'sustainable'. The smart city has quickly emerged as computers have become ever smaller to the point where they can be embedded into the very fabric of the city, as well as central to new ways in which the population can communicate and act. When cities are wired in this way, they have the potential to become sentient and responsive, generating massive streams of 'big' data in real time as well as providing immense opportunities for extracting new forms of urban data through crowdsourcing. This book offers a comprehensive review of the methods that form the core of urban informatics from various kinds of urban remote sensing to new approaches to machine learning and statistical modelling. It provides a detailed technical introduction to the wide array of tools information scientists need to develop the key urban analytics that are fundamental to learning about the smart city, and it outlines ways in which these tools can be used to inform design and policy so that cities can become more efficient with a greater concern for environment and equity. Advanced Concepts for Intelligent Vision Systems 15th International Conference, ACIVS 2013, Poznań, Poland, October 28-31, 2013, Proceedings Springer This book constitutes the thoroughly refereed proceedings of the 15th International Conference on Advanced Concepts for Intelligent Vision Systems, ACIVS 2013, held in Poznań, Poland, in October 2013. The 63 revised full papers were carefully selected from 111 submissions. The topics covered are aquisition, pre-processing and coding, biometry, classification and recognition, depth, 3D and tracking, efficient implementation and frameworks, low level image analysis, segmentation and video analysis. Remote Sensing Applications for the Urban Environment CRC Press Land use and land cover changes associated with increased urbanization have led to landscape and environmental changes throughout the world. Remote Sensing Applications for the Urban Environment places emphasis on the rapid development of worldwide urbanization and its impact on the environment, and reviews the assessment of urban land cover condit Encyclopedia of GIS Springer Science & Business Media The Encyclopedia of GIS provides a comprehensive and authoritative guide, contributed by experts and peer-reviewed for accuracy, and alphabetically arranged for convenient access. The entries explain key software and processes used by geographers and computational scientists. Major overviews are provided for nearly 200 topics: Geoinformatics, Spatial Cognition, and Location-Based Services and more. Shorter entries define specific terms and concepts. The reference will be published as a print volume with abundant black and white art, and simultaneously as an XML online reference with hyperlinked citations, cross-references, four-color art, links to web-based maps, and other interactive features. Remote Sensing Applications BoD – Books on Demand Nowadays it is hard to find areas of human activity and development that have not profited from or contributed to remote sensing. Natural, physical and social activities find in remote sensing a common ground for interaction and development. This book intends to show the reader how remote sensing impacts other areas of science, technology, and human activity, by displaying a selected number of high quality contributions dealing with different remote sensing applications. Intelligent Interactive Multimedia Systems and Services 2017 Springer This book constitutes the refereed proceedings of the Tenth International KES Conference on Intelligent Interactive Multimedia Systems and Services: IIMSS-17. It includes 57 full papers organized into topical sections, ranging from visual data processing to big data analytics, and from multimedia to intelligent and cognitive systems. The conference took place as part of the Smart Digital Futures 2017 multi-theme conference, held in Vilamoura, Algarve, Portugal on 21-23 June 2017, which brings together AMSTA, IDT, InHorizons, InMed, SEEL and IIMSS in one venue. It provided an international forum for researchers and scientists to share their work and experiences in the field of multimedia and intelligent interactive systems and services. Mathematical Morphology and Its Applications to Image and Signal Processing 10th International Symposium, ISMM 2011, Verbania-Intra, Italy, July 6-8, 2011, Proceedings Springer Science & Business Media This book contains the refereed proceedings of the 10th International Symposium on Mathematical Morphology, ISMM 2011

held in Verbania-Intra, Italy in July 2011. It is a collection of 39 revised full papers, from which 27 were selected for oral and 12 for poster presentation, from a total of 49 submissions. Moreover, the book features two invited contributions in the fields of remote sensing, image analysis and scientific visualization. The papers are organized in thematic sections on theory, lattices and order, connectivity, image analysis, processing and segmentation, adaptive morphology, algorithms, remote sensing, visualization, and applications. Remote Sensing and Cognition Human Factors in Image Interpretation CRC Press Human factors play a critical role in the design and interpretation of remotely sensed imagery for all Earth sciences. Remote Sensing and Cognition: Human Factors in Image Interpretation brings together current topics widely recognized and addressed regarding human cognition in geographic imagery, especially remote sensing imagery with complex data. It addresses themes around expertise including methods for knowledge elicitation and modeling of expertise, the effects of different aspects of realism on the interpretation of the environment, spatial learning using imagery, the effect of visual perspective on interpretation, and a variety of technologies and methods for utilizing knowledge in the analysis of remote sensing imagery. Written by leaders in the field, this book provides answers to the host of questions raised at the nexus of psychology and remote sensing. Academics and researchers with an interest in the human issues surrounding the use of remote sensing data will find this book to be an invaluable resource. The topics covered in this book are useful for both the scientific analysis of remote sensing imagery as well as the design and display of remote sensing imagery to facilitate a variety of other tasks including education and wayfinding. Features Brings together remote sensing, environmental, and computer scientists discussing their work from a psychological or human factors perspective Answers questions related to aesthetics of scientific visualization and mathematical analysis of perceptible objects Explains the perception and interpretation of realistic representations Provides illustrative real-world examples Shows how the features of display symbols, elements, and patterns have clear effects on processes of perception and visual search Science and Conservation in the Galapagos Islands Frameworks & Perspectives Springer Science & Business Media In this launch of the Galapagos series, this book provides a broad "framing" assessment of the current status of social and ecological systems in the Galapagos Islands, and the feedback that explicitly links people to the environment. It also highlights the challenges to conservation imposed by tourism in the Galapagos Islands and the attendant migration of people from mainland Ecuador to service the burgeoning tourism industry. Further, there is an emphasize on the status of the terrestrial and marine environments that form the very foundation of the deep attraction to the Islands by tourists, residents, scholars, and conservationists. Ecosystem Function in Savannas Measurement and Modeling at Landscape to Global Scales CRC Press Fascinating and diverse, savanna ecosystems support a combination of pastoral and agropastoral communities alongside wild and domestic herbivores that can be found nowhere else. This diversity has made the study of these areas problematic. Ecosystem Function in Savannas: Measurement and Modeling at Landscape to Global Scales addresses some of the discontinuities in the treatment of savannas by the scientific community and documents a range of measurements, methods, technologies, applications, and modeling approaches. Based on contributions from leading authorities and experts on savanna systems worldwide, the book describes the global savanna biome in terms of its broad ecological properties, temporal dynamics, disturbance levels, and human dimensions. The text examines carbon, water, energy, and trace gas fluxes for major global savanna regions. It looks at quantitative surface properties of savannas that can be retrieved using remote sensing and numerical approaches used to explore savanna dynamics. The authors also discuss how savanna modeling and measurement approaches might be unified. By presenting this confluence of information in a single resource, the book provides a platform for examining synergies, connections, integrative opportunities, and complementarities among approaches and data sources. This information can then be used to harmonize measurement and modeling methods among scales and across disciplinary boundaries. The book builds a bridge across the markedly different perspectives on savannas by which ecologists, biogeochemists, remote sensors, geographers, anthropologists, and modelers approach their science. Spatial Inequalities Health, Poverty, and Place in Accra, Ghana Springer Science & Business Media This book provides a fresh analysis of the demography, health and well-being of a major African city. It brings a range of disciplinary approaches to bear on the pressing topics of urban poverty, urban health inequalities and urban growth. The approach is primarily spatial and includes the integration of environmental information from satellites and other geospatial sources with social science and health survey data. The authors Ghanaians and outsiders, have worked to understand the urban dynamics in this burgeoning West African metropolis, with an emphasis on urban disparities in health and living standards. Few cities in the global South have been examined from so many different perspectives. Our analysis employs a wide range of GIScience methods, including analysis of remotely sensed imagery and spatial statistical analysis, applied to a wide range of data, including census, survey and health clinic data, all of which are supplemented by field work, including systematic social observation, focus groups, and key informant interviews. This book aims to explain and highlight the mix of methods, and the important findings that have been emerging from this research, with the goal of providing guidance and inspiration for others doing similar work in cities of other developing nations. Institute of Energy and Climate Research IEK-6: Nuclear Waste Management & Reactor Safety Report 2009/2010 Material Science for Nuclear Waste Management Forschungszentrum Jülich Imagery and GIS Best Practices for Extracting Information from Imagery ESRI Press The first in-depth book about using imagery with ArcGIS Computational Vision and Medical Image Processing: VipIMAGE 2011 CRC Press This book contains invited lecturers and full papers presented at VIPIMAGE 2011 - III ECCOMAS Thematic Conference on Computational Vision and Medical Image Processing (Olh Algarve, Portugal, 12-14 October 2011). International contributions from 16 countries provide a comprehensive coverage of the current state-of-the-art in: Image Processing Deep Learning for Computer Vision Image Classification, Object Detection, and Face Recognition in Python Machine Learning Mastery Step-by-step tutorials on deep learning neural networks for computer vision in python with Keras. Topics in Medical Image Processing and Computational Vision Springer Science & Business Media The sixteen chapters included in this book were written by invited experts of international recognition and address important issues in Medical Image Processing and Computational Vision, including: Object Recognition, Object Detection, Object Tracking, Pose Estimation, Facial Expression Recognition, Image Retrieval, Data Mining, Automatic Video Understanding and Management, Edges Detection, Image Segmentation, Modelling and Simulation, Medical thermography, Database Systems, Synthetic Aperture Radar and Satellite Imagery. Different applications are addressed and described throughout the book, comprising: Object Recognition and Tracking, Facial Expression Recognition, Image Database, Plant Disease Classification, Video Understanding and Management, Image Processing, Image Segmentation, Bio-structure Modelling and Simulation, Medical Imaging, Image Classification, Medical Diagnosis, Urban Areas Classification, Land Map Generation. The book brings together the current state-of-the-art in the various multi-disciplinary solutions for Medical Image Processing and Computational Vision, including research, techniques, applications and new trends contributing to the development of the related areas. Image Processing in Agriculture and Forestry MDPI This book is a printed edition of the Special Issue "Image Processing in Agriculture and Forestry" that was published in J. Imaging Remote Sensing and Geospatial Technologies for Coastal Ecosystem Assessment and Management Springer Science & Business Media In this landmark publication, leading experts detail how remote sensing and related geospatial technologies can be used for coastal ecosystem assessment and management. This book is divided into three major parts. In the first part several conceptual and technical issues of applying remote sensing and geospatial technologies in the coastal environment are examined. The second part showcases some of the latest developments in the use of remote sensing and geospatial technologies when characterizing coastal waters, submerged aquatic vegetation, benthic habitats, shorelines, coastal wetlands and watersheds. Finally, the last part demonstrates a watershed-wide synthetic approach that links upstream stressors with downstream responses for integrated coastal ecosystem assessment and management.