An Automatic Brain Tumor Detection And Segmentation Using


Brain Tumor Detection Based on Convolutional Neural Network with Neutrosophic Expert Maximum Fuzzy Sure Entropy: Reviews the most intriguing applications of fractal analysis in neuroscience with a focus on current and future potential, limits, advantages, and disadvantages. Will bring an understanding of fractals to clinicians and researchers also if they do not have a mathematical background, and will serve as a good tool for teaching the translational applications of computational models to students and scholars of different disciplines. This comprehensive collection is organized in four parts: (1) Basics of fractal analysis; (2) Applications of fractals to the basic neurosciences; (3) Applications of fractals to the clinical neurosciences; (4) Analytic software, modeling and methodology.

Innovations in Computer Science and Engineering

Brain Tumor Segmentation Methods - A Review: This book presents original contributions on the theories and practices of emerging Internet, data and Web technologies and their applicability in businesses, engineering and academia, focusing on advances in the life-cycle exploitation of data generated from the digital ecosystem data technologies that create value, e.g. for businesses, toward a collective intelligence approach. The Internet has become the most proliferative platform for emerging large-scale computing paradigms. Among these, data and web technologies are two of the most prominent paradigms and are found in a variety of forms, such as data centers, cloud computing, mobile cloud, and mobile Web services. These technologies together create a digital ecosystem whose cornerstone is the data cycle, from capturing to processing, analyzing and visualizing. The investigation of various research and development issues in this digital ecosystem are made more pressing by the ever-increasing requirements of real-world applications that are based on storing and processing large amounts of data. The book is a valuable resource for researchers, software developers, practitioners and students interested in the field of data and web technologies.

Brainlesion: Glioma, Multiple Sclerosis, Stroke and Traumatic Brain Injuries: The volume contains latest research work presented at International Conference on Computing and Communication Systems (IC3S 2016) held at North Eastern Hill University (NEHU), Shillong, India.
The book presents original research results, new ideas and practical development experiences which concentrate on both theory and practices. It includes papers from all areas of information technology, computer science, electronics and communication engineering written by researchers, scientists, engineers and scholar students and experts from India and abroad.

Evolving Technologies for Computing, Communication and Smart World This 2 volume-set of IFIP AICT 583 and 584 constitutes the refereed proceedings of the 16th IFIP WG 12.5 International Conference on Artificial Intelligence Applications and Innovations, AIAI 2020, held in Neus Marmaras, Greece, in June 2020. * The 70 full papers and 5 short papers presented were carefully reviewed and selected from 149 submissions. They cover a broad range of topics related to technical, legal, and ethical aspects of artificial intelligence systems and their applications and are organized in the following sections: Part I: classification; clustering - unsupervised learning - analytics; image processing; learning algorithms; neural network modeling; object tracking - object detection systems; ontologies - AI, and sentiment analysis - recommender systems. Part II: AI ethics - low; AI constraints; deep learning - LSTM; fuzzy algebra - fuzzy systems; machine learning; medical - health systems; and natural language. *The conference was held virtually due to the COVID-19 pandemic.

Deep Learning and Data Labeling for Medical Applications

World Congress on Medical Physics and Biomedical Engineering 2018 Brain Tumor MRI Image Segmentation Using Deep Learning Techniques offers a description of deep learning approaches used for the segmentation of brain tumors. The book demonstrates core concepts of deep learning algorithms by using diagrams, data tables and examples to illustrate brain tumor segmentation. After introducing basic concepts of deep learning-based brain tumor segmentation, sections cover techniques for modeling, segmentation and properties. A focus is placed on the application of different types of convolutional neural networks, like single path, multi path, fully convolutional network, cascade convolutional neural networks, Long Short-Term Memory - Recurrent Neural Network and Gated Recurrent Units, and more. The book also highlights how the use of deep neural networks can address new questions and protocols, as well as improve upon existing challenges in brain tumor segmentation. Provides readers with an understanding of deep learning-based approaches in the field of brain tumor segmentation, including preprocessing techniques integrates recent advancements in the field, including the transformation of low-resolution brain tumor images into super-resolution images using deep learning-based methods, single path Convolutional Neural Network based brain tumor segmentation, and much more includes coverage of Long Short-Term Memory (LSTM) based Recurrent Neural Network (RNN), Gated Recurrent Units (GRU) based Recurrent Neural Network (RNN), Generative Adversarial Networks (GAN), Auto Encoder based brain tumor segmentation, and Ensemble deep learning Model based brain tumor segmentation Covers research Issues and the future of deep learning-based brain tumor segmentation

Nested Neural Networks This book constitutes the refereed proceedings of the 21st Annual Conference on Medical Image Understanding and Analysis, MIUA 2017, held in Edinburgh, UK, in July 2017. The 82 revised full papers presented were carefully reviewed and selected from 105 submissions. The papers are organized in topical sections on retinal imaging, ultrasound imaging, cardiovascular imaging, endoscopy imaging, mammography image analysis, image enhancement and alignment, modeling and segmentation of preclinical, biological and histological imaging, feature detection and classification. The chapters 'Model-Based Correction of Segmentation Errors in Digitized Histological Images' and 'Unsupervised Supervised-Based Segmentation of Histopathological Images with Consensus Clustering' are open access under a CC BY 4.0 license.

Hybrid Machine Intelligence for Medical Image Analysis This book presents best selected papers presented at the International Conference on Evolving Technologies for Computing, Communication and Smart World (ETCCS 2020) held on 31 January-1 February 2020 at C-DAC, Noida, India. It is co-organized by Southern Federal University, Russia; University of Jan Wyzkowski (UWJ), Polkowice, Poland; and C-DAC, Noida received funding from Ministry of Electronics and Information Technology (MeitY) during the event. The technical services are supported through EasyChair, Turnitin, MailChimp and IAC Education. The book includes current research works in the areas of network and computing technologies, wireless networks and Internet of things (IoT), futuristic computing technologies, communication technologies, security and privacy.

Advances in Internet, Data & Web Technologies These are the proceedings of the 10th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty, ECSQARU 2009, held in Verona (Italy), July 1-3, 2009. The biennial ECSQARU conferences are a major forum for advances in the theory and practice of reasoning under uncertainty. The 7th ECSQARU conference was held in Madrid (1991), and since then it has been held in Granada (1993), Fribourg (1995), Boff (1997), London (1999), Toulouse (2001), Aalborg (2003), Barcelona (2005) and Hammamet (2007). The 76 papers gathered in this volume were selected out of 180 submissions from 34 countries, after a rigorous review process. In addition, the conference included invited lectures by three outstanding researchers in the area: Isabelle Bloch ("Fuzzy and bipolar mathematical morphology, applications in spatial reasoning"); Piet Cornelis ("From (deductive) fuzzy logic to (logic-based) fuzzy mathematics"); and Daniele Mundici ("Conditional independence and in- valued logical languages"). Two special sessions were presented during the conference: "Conditioning, dependence, inference" (organized by Giulia Loiroti and Barbara Vantaggi) and "Mathematical/fuzzy logic" (organized by Stefano Aguzzoli, Brunella Gerla, Lluís Godo, Vincenzo Marra, Franco Montagna) On the whole, the program of the conference provided a broad, rich and up-to-date perspective of the current high-level research in the areas which is reflected in the contents of this volume.

Artificial Intelligence and Internet of Things "This book examines the challenging issues of artificial intelligence in medical imaging diagnostics".

Pathology - E-Book The popularity of magnetic resonance (MR) imaging in medicine is no mystery: it is non-invasive, it produces high quality structural and functional image data, and it is very versatile and flexible. Research into MR technology is advancing at a blistering pace, and modern engineers must keep up with the latest developments. This is only possible with a firm grounding in the basic principles of MR, and Advanced Image Processing in Magnetic Resonance Imaging solidly integrates this foundational knowledge with the latest advances in the field. Beginning with the basics of signal and image generation and reconstruction, the book covers in detail the signal processing techniques and algorithms, filtering techniques for MR images, quantitative analysis including image registration and integration of EEG and MEG techniques with MR, and MR spectroscopy techniques. The final section of the book explores Functional MRI (fMRI) in detail, discussing fundamentals and advanced exploratory data analysis, Bayesian inference, and nonlinear analysis. Many of the results presented in the book are derived from the contributors' own work, imparting highly practical experience through experimental and numerical methods. Contributed by international experts at the forefront of the field, Advanced Image Processing in Magnetic Resonance Imaging is an indispensable guide for anyone interested in further advancing the technology and capabilities of MR imaging.

Medical Imaging: Concepts, Methodologies, Tools, and Applications This book (vol. 1) presents the proceedings of the IUPESM World Congress on Biomedical Engineering and Medical Physics, a triennially organized joint meeting of medical physicists, biomedical engineers and adjusting health care professionals. Besides the purely scientific and technological topics, the 2018 Congress will also focus on other aspects of professional involvement in health care, such as education and training, accreditation and certification, health technology assessment and patient safety. The IUPESM Congress is an important forum for medical physicists, engineers and medical physicists and health care professionals and relevant stakeholders and experts from around the world to come together and discuss the latest research outcomes and technological advancements as well as new ideas in both medical physics and biomedical engineering field.

Automatic Brain Tumor Segmentation with Convolutional Neural Network There have been a lot of trials and efforts to combine communication technology (ICT) to other industrial sectors such as green convergence, smart screen & appliances, next generation broadcasting & media, mobile convergence networks, and other ICT convergence applications and services, all under the name of ICT convergence ICTC is a unique global premier event for researchers, industry professionals, and academics, which aims at interacting with and disseminating information on the latest developments in the emerging industrial convergence and centered around the information and communication technologies More specifically, it will address challenges with realizing ICT convergence over the various industrial sectors, including the infrastructures and applications in wireless & mobile communication, smart devices & consumer appliances, Internet of Things (IoT), M2M, Security, and intelligent transportation

High-Resolution Neuroimaging This book constitutes the refereed proceedings of two workshops held at the 19th International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2016, Athens, Greece, in October 2016: the First Workshop on Large-Scale Annotation of Biomedical Data and Expert Label Synthesis, LABELS 2016, and the Second International Workshop on Deep Learning in Medical Image Analysis, DLIMA 2016. The 28 revised regular papers presented in this book were carefully reviewed and selected from a total of 52 submissions. The 7 papers selected for LABELS deal with topics from the following fields: crowd-sourcing methodic active learning; transfer learning; semi-supervised learning; and modeling of label uncertainty. The 21 papers selected for DLIMA span a wide range of topics such as image description; medical imaging-based diagnostics; medical signal-based diagnostics; medical image reconstruction and model selection using deep learning techniques; meta-heuristic techniques for fine-tuning parameter in deep learning-based architectures; and applications based on deep learning techniques.
Brain Tumor MRI Image Segmentation Using Deep Learning Techniques The book discusses the impact of machine learning and computational intelligent algorithms on medical image data processing, and introduces the latest trends in machine learning technologies and computational intelligence for intelligent medical image analysis. The topics covered include automated region of interest detection of magnetic resonance images based on center of gravity; brain tumor detection through low-level features detection; automatic MRI image segmentation for brain tumor detection using the multi-level sigmoid activation function; and computer-aided detection of mammographic lesions using convolutional neural networks.

2018 9th International Conference on Computing, Communication and Networking Technologies (ICCCNT) Understand how a patient's conditions might affect physical therapy and outcomes so you can design safe and effective interventions. The only pathophysiology textbook written specifically for physical therapists, Pathology: Implications for the Physical Therapist, Third Edition, offers guidelines, precautions, and contraindications for interventions with patients who have musculoskeletal or neuromuscular problems as well as other conditions such as diabetes, heart disease, or pancreatitis. Learn about the cause of these conditions, the pathogenesis, medical diagnosis and treatment, and most importantly, the special implications for the therapist. In addition to addressing specific diseases and conditions, this text emphasizes health promotion and disease prevention strategies and covers issues with implications for physical therapy management, such as injury, inflammation, and healing; the lymphatic system; and biopsychosocial-spiritual impacts on health care. With this practical and evidence-based text, now enhanced with full-color illustrations and the latest research, you'll know what to factor into your clinical decisions to achieve the best outcomes for your patients. Incorporates the Medical Model, the Disablement Model, and the ICF Model Incorporates Preferred Practice Patterns from the Guide to Physical Therapist Practice, Second Edition throughout the text Presents key information in an at-a-glance format that is organized by body system for easy reference Provides the basic science information and the clinical implications of disease within the rehabilitation process, covering common illnesses and diseases, adverse effects of drugs, organ transplantation, laboratorv's value, and much more Focuses on health promotion and disease prevention throughout Special Implications for the Therapist sections present the most likely practice patterns associated with each disease or disorder and address precautions, contraindications, and considerations specific to PTs. Current information on conditions, medical testing and treatment, and practice models keeps you up-to-date on the latest research findings and recent changes in the field. Companion Evolve site provides a wealth of resources referenced in the text with links to Medline, Tables and text boxes throughout the text summarize important information and highlight key points.

International Conference on Intelligent Computing and Applications Dr. Amit Morr Malafollas mostly deals with research fields in body imaging and neuroradiology with multidetector computed tomography and high-resolution magnetic resonance imaging. He has served as postdoctoral research fellow at Johns Hopkins Hospital. Currently, he is working as an associate professor of radiology in Istanbul, Turkey. He has more than 50 high-impact-factor publications and has written 3 book chapters. He is a member of Turkish Society of Radiology and European Society of Radiology. During the recent years, there have been major breakthroughs in MRI due to developments in scanner technology and pulse sequencing. These important achievements have led to impressive improvements in neuroimaging and advanced techniques, including diffusion imaging, diffusion tensor imaging, perfusion imaging, magnetic resonance spectroscopy, and functional MRI. These advanced neuroimaging techniques have enabled us to achieve invaluable insights into tissue microstructure, microvasculature, metabolism, and brain connectivity.

Brain Tumor Imaging The book is a collection of high-quality peer-reviewed research papers presented at the Fifth International Conference on Innovations in Computer Science and Engineering (ICICSE 2017) held at Guru Nanak Institutions, Hyderabad, India during 18-19 August 2017. The book discusses a wide variety of industrial, original engineering and scientific applications of the engineering techniques. Researchers from academic and industrial present their original work and exchange ideas, information, techniques and applications in the field of Communication, Computing and Data Science and Analytics. Proeceedings of the International Conference on Computing and Communication Systems Automated segmentation of brain lesions in magnetic resonance images (MRI) is a difficult procedure due to the variability and complexity of the location, size, shape, and texture of these lesions. In this study, four algorithms for brain lesion detection and segmentation using MRI are proposed. In the first algorithm, an automatic algorithm for brain stroke lesion detection and segmentation using single-spectral MRI is proposed, which is called histogram-based gravitational optimization algorithm (HGOA). HGOA is a novel intensity-based segmentation technique that enhances gravitational optimization algorithm on histogram analysis results to segment the brain lesion. The ischaemic stroke lesions are segmented with 91.5% accuracy. Best results are achieved with 88% accuracy. Since histogram approach limits the extracted information to the number of pixels in specific gray levels and does not include any region-based information, the accuracy of a histogram-based method is limited. In the second algorithm, in order to increase the accuracy of brain tumor segmentation, a texture-based automated approach is presented. The experimental results on T1-weighted, T2-weighted, and fluid-attenuated inversion recovery (FLAIR) images on both simulated and real brain MRI data prove the efficiency of our technique in successfully segmentation of brain lesions with high accuracy (95.9 ± 0.4% for database of simulated MR images, and 93.2 ± 0.3% for database of real MR images). In order to reduce the computational complexity and expedite the segmentation algorithm, and also to improve the system performance, some modifications are applied in the algorithm presented in previous algorithm. In the third algorithm, a fully automatic tumor system, which is combination of texture-based and contour-based algorithms is presented. Skippy greedy snake model is capable of segmenting the tumor area; however, the algorithm's accuracy and performance significantly depends on its initial points. Here, we modify the previous algorithm to automatically find proper initial points, which not only obviates the requirement of manual interference, but also increase the accuracy and speed of optimization convergence. Comparing with previous method, this method achieves higher accuracy in tumor segmentation (96.8 ± 0.3% for database of simulated MR images, and 93.8 ± 0.1% for database of real MR images) and lower computational complexity. The intensity similarities between brain lesions and some normal tissues result in confusion within segmentation algorithms, especially in the database of real MR images. In order to improve the system performance, a multi-spectral approach based on feature-level fusion is presented in forth algorithm. Even though using multi-spectral MRI has several drawbacks and limitations, since it makes use of complementary information, it increases the accuracy of the system. Here, a feature-level fusion technique based on canonical correlation analysis (CCA) is proposed. It is worth mentioning that for the first time CCA is applied for combining MRI sequences in order to segment tumors. Even though data fusion increases computational complexity of the segmentation algorithm, it results in a higher accuracy (95.8 ± 0.2% for database of real MR images).

Artificial Intelligence Applications and Innovations Medical image processing and its segmentation is an active and interesting area for researchers. It has reached at the tremendous place in diagnosing tumors after the discovery of CT and MRI. MRI is an useful tool to detect brain tumor from MR images. In order to improve the system performance, a multi-spectral approach based on feature-level fusion is presented in forth algorithm. Even though using multi-spectral MRI has several drawbacks and limitations, since it makes use of complementary information, it increases the accuracy of the system. Here, a feature-level fusion technique based on canonical correlation analysis (CCA) is proposed. It is worth mentioning that for the first time CCA is applied for combining MRI sequences in order to segment tumors. Even though data fusion increases computational complexity of the segmentation algorithm, it results in a higher accuracy (95.8 ± 0.2% for database of real MR images).

Deep Neural Networks for Multimodal Imaging and Biomedical Applications Recent advancements and innovations in medical image and data processing have led to a need for robust and secure mechanisms to transfer images and signals over the internet and maintain copyright protection. The Handbook of Research on Information Security in Biomedical Signal Processing provides emerging research and applications in information security, data as well as techniques for accurate reading and further processing. While highlighting topics such as image processing, secure access, and watermarking, this book explores advanced models and algorithms in information security in the modern healthcare system. This publication is a vital resource for academicians, medical professionals, technology developers, researchers, students, and practitioners seeking current research on intelligent techniques in medical data security. Multimodal Brain Tumor Segmentation and Beyond Nested neural networks, consisting of small interconnected subnetworks, allow for the storage and retrieval of neural state patterns of different sizes. The subnetworks are naturally categorized by layers of corresponding to spatial frequencies in the pattern field. The storage capacity and the error correction capability of the subnetworks greatly increase with the degree of connectivity between layers (the nesting degree). Storage of only few subpatterns in each subnetworks results in a vast storage capacity of patterns and subpatterns in the nested network, maintaining high stability and error correction capability. Barum, Yoram Ames Research Center RTOP 505-66-11 Visual Computing for Medicine This two-volume set LNCS 11383 and 11384 constitutes revised selected papers from the 4th International MICCAI Brainlesion Workshop, BrainLes 2018, as well as the International Multimodal Brain Tumor Segmentation, BraTS, Ischemic Stroke Lesion Segmentation, ISLES, MR Brain Image Segmentation, MRRBrainS18, Computational Precision Medicine, CPM, and Stroke Workshop on Imaging and Treatment Challenges, SWITCH, which were held jointly at the Medical Image Computing for Computer Assisted Intervention Conference, MICCAI, in Granada, Spain, in September 2018. The 92 papers presented in this volume were carefully reviewed and selected from 95 submissions. They were organized in topical sections named: brain lesion image analysis; brain tumor image analysis; computational intelligence for intelligent medical image analysis. The topics covered include automated region of interest detection of magnetic resonance images based on center of gravity; brain tumor detection through low-level features detection; automatic MRI image segmentation for brain tumor detection using the multi-level sigmoid activation function; and computer-aided detection of mammographic lesions using convolutional neural networks.
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segmentation; ischemic stroke lesion image segmentation; grand challenge on MR brain segmentation; computational precision medicine; stroke workshop on imaging and treatment challenges.

Automated Brain Lesion Detection and Segmentation Using Magnetic Resonance Images Brain tumor classification is a challenging task in the field of medical image processing. The present study proposes a hybrid method using Neutrosophy and Convolutional Neural Network (NS-CNN). It aims to classify tumor region areas that are segmented from brain images as benign and malignant. In the first stage, MRI images were segmented using the neutrosophic set – expert maximum fuzzy-sure entropy (NS-EMFSE) approach.

Brainlesion: Glioma, Multiple Sclerosis, Stroke and Traumatic Brain Injuries

Decision Forests There are multiple types of Brain Tumors, which can be difficult to evaluate that leads to unpleasant result for the patient. Thus, detection and treatment planning of the brain tumor is the most important factor in the process. Magnetic resonance imaging (MRI) is broadly used technique to evaluate the brain tumors. Manual segmentation of brain tumor from MRI consumes more time and depended on the experience of the machinist. Thus, automated techniques for the segmentation are required to ease the treatment planning. Even in the automated methods for the segmentation is not so easy because of the various types of the brain tumors. Thus, it is necessary to have reliable method for brain tumor segmentation which can measure the tumors efficiently and less time consuming. In this paper, we propose a technique for brain tumor segmentation which is created using U-Net based convolutional neural network. The technique was evaluated on datasets called Multimodal Brain Tumor Image Segmentation (BRATS 2019). This dataset contains more than 76 cases of low-grade tumor and 259 cases of high-grade tumor.

Advanced Image Processing in Magnetic Resonance Imaging Medical imaging has transformed the ways in which various conditions, injuries, and diseases are identified, monitored, and treated. As various types of digital visual representations continue to advance and improve, new opportunities for their use in medical practice will likewise evolve. Medical Imaging: Concepts, Methodologies, Tools, and Applications presents a compendium of research on digital imaging technologies in a variety of healthcare settings. This multi-volume work contains practical examples of implementation, emerging trends, case studies, and technological innovations essential for using imaging technologies for making medical decisions. This comprehensive publication is an essential resource for medical practitioners, digital imaging technologists, researchers, and medical students.

Medical Image Understanding and Analysis The Ninth International Conference on Computing, Communication and Networking Technologies (9th ICCCNT 2018) aims to provide a platform that brings together International researchers from academia and practitioners in the industry to meet and exchange ideas and recent research work on all aspects of Information and Communication Technologies. The conference will host the great success of ICCCNT 08, ICCCNT 10, ICCCNT 12, ICCCNT 13, ICCCNT 14, ICCCNT 15, ICCCNT 16 and ICCCNT 17. The ninth edition of the event, ICCCNT 17, will be held in IISc, Bangalore on July 10-12, 2018. The conference will consist of keynote speeches, technical sessions, and exhibition. The technical sessions will present original and fundamental research advances, and the workshops will focus on hot topics in Information and Communication Engineering Experts from NASA, MIT, Japan will give keynote speeches.

Progress in Pattern Recognition, Image Analysis, Computer Vision, and Applications This book describes the basics, the challenges, and the limitations of state of the art brain tumor imaging and examines in detail its impact on diagnosis and treatment monitoring. It opens with an introduction to the clinically relevant physical principles of brain imaging. Since MR methodology plays a crucial role in brain imaging, the fundamental aspects of MR spectroscopy, MR perfusion and diffusion-weighted MR methods are described, focusing on the specific demands of brain tumor imaging. The potential and the limits of new imaging methodology are carefully addressed and compared to conventional MR imaging. In the main part of the book, the most important imaging criteria for the differential diagnosis of solid and necrotic brain tumors are delineated and illustrated in examples. A closing section is devoted to the use of MR methods for the monitoring of brain tumor therapy. The book is intended for radiologists, neurologists, neuroradiologists, and other scientists in the biomedical field with an interest in neuro-oncology.

Handbook of Research on Information Security in Biomedical Signal Processing This book constitutes the refereed post-conference proceedings of the 23rd Iberoamerican Congress on Pattern Recognition, CIARP 2018, held in Madrid, Spain, in November 2018. The 112 papers presented were carefully reviewed and selected from 187 submissions. The program was comprised of 6 oral sessions on the following topics: image processing, machine learning, computer vision, classification, biometrics and medical applications, and brain signals, and also on: text and character analysis, human interaction, and sentiment analysis.

2019 International Conference on Information and Communication Technology Convergence (ICTC) This volume provides a deeper understanding of the diagnosis of brain tumors by correlating radiographic imaging features with the underlying pathological abnormalities. All modern imaging modalities are used to complete a diagnostic overview of brain tumors with emphasis on recent advances in diagnostic neuroradiology. High-quality illustrations depicting common and uncommon imaging characteristics of a wide range of brain tumors are presented and analyzed, drawing attention to the ways in which these characteristics reflect different aspects of pathology. Important theoretical considerations are also discussed. Since the first edition, chapters have been revised and updated; new material has been added, including detailed information on the clinical application of functional MRI and diffusion tensor imaging. Radiologists and other clinicians interested in the current diagnostic approach to brain tumors will find this book to be an invaluable and enlightening clinical tool.

CMBERBH 2017 The book is a collection of best papers presented in International Conference on Intelligent Computing and Applications (ICCA 2016) organized by Department of Computer Engineering, D.Y. Patil College of Engineering, Pune, India during 20-22 December 2016. The book presents original work, information, techniques and applications in the field of computational intelligence, power and computing technology. This volume also talks about image language processing, computer vision and pattern recognition, machine learning, data mining and computational life sciences, management of data including Big Data and analytics, distributed and mobile systems including grid and cloud infrastructure.

AI Innovation in Medical Imaging Diagnostics Presents a unified, efficient model of random decision forests which can be used in a number of applications such as scene recognition from photographs, object recognition in images, automatic diagnosis from radiological scans and document analysis.

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