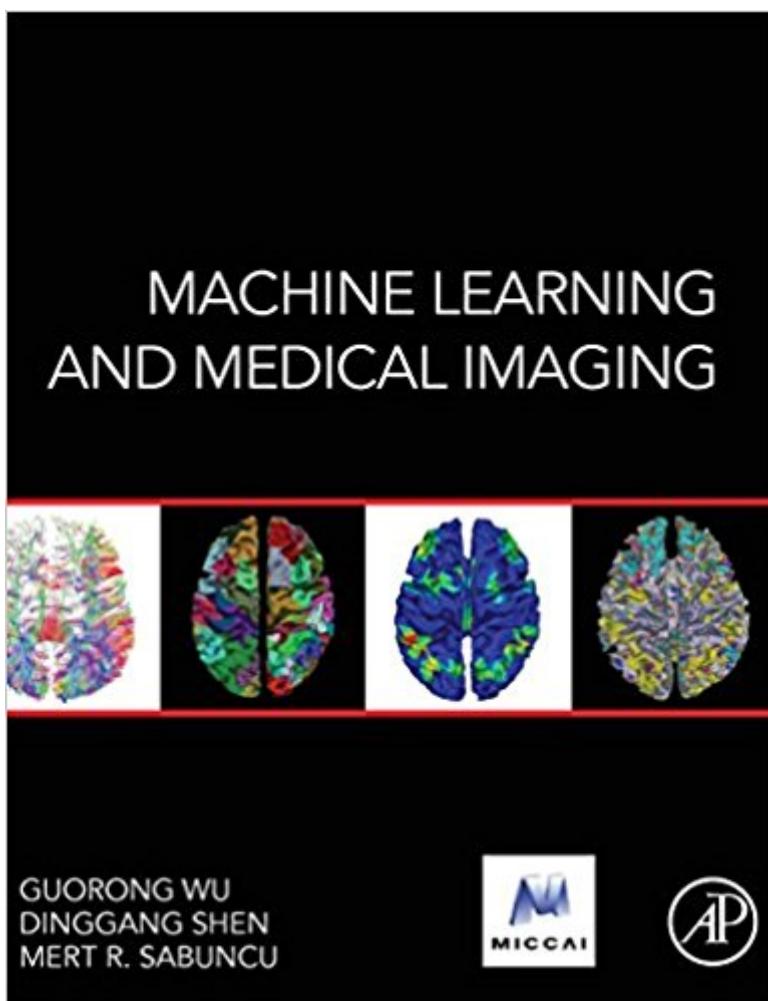


The book was found

# Machine Learning And Medical Imaging (Elsevier And Micca Society)



## Synopsis

Machine Learning and Medical Imaging presents state-of-the-art machine learning methods in medical image analysis. It first summarizes cutting-edge machine learning algorithms in medical imaging, including not only classical probabilistic modeling and learning methods, but also recent breakthroughs in deep learning, sparse representation/coding, and big data hashing. In the second part leading research groups around the world present a wide spectrum of machine learning methods with application to different medical imaging modalities, clinical domains, and organs. The biomedical imaging modalities include ultrasound, magnetic resonance imaging (MRI), computed tomography (CT), histology, and microscopy images. The targeted organs span the lung, liver, brain, and prostate, while there is also a treatment of examining genetic associations. Machine Learning and Medical Imaging is an ideal reference for medical imaging researchers, industry scientists and engineers, advanced undergraduate and graduate students, and clinicians. Demonstrates the application of cutting-edge machine learning techniques to medical imaging problemsCovers an array of medical imaging applications including computer assisted diagnosis, image guided radiation therapy, landmark detection, imaging genomics, and brain connectomicsFeatures self-contained chapters with a thorough literature reviewAssesses the development of future machine learning techniques and the further application of existing techniques

## Book Information

Series: Elsevier and Micca Society

Hardcover: 512 pages

Publisher: Academic Press; 1 edition (August 23, 2016)

Language: English

ISBN-10: 0128040769

ISBN-13: 978-0128040768

Product Dimensions: 7.5 x 1.1 x 9.2 inches

Shipping Weight: 2.7 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #905,127 in Books (See Top 100 in Books) #131 in Books > Medical Books > Medical Informatics #189 in Books > Computers & Technology > Computer Science > AI & Machine Learning > Computer Vision & Pattern Recognition #239 in Books > Computers & Technology > Computer Science > Bioinformatics

## Customer Reviews

This book presents state-of-the-art of machine learning methods in medical image analysis. It first summarizes cutting-edge machine learning algorithms in medical imaging, including not only classical probabilistic modeling and learning methods, but also recent breakthroughs in deep learning, sparse representation/coding, and big data hashing. In the second part leading research groups around the world present a wide spectrum of machine learning methods with their application to different medical imaging modalities, clinical domains and organs. The biomedical imaging modalities include ultrasound, magnetic resonance imaging (MRI), computed tomography (CT), histology, and microscopy images. The targeted organs span the lung, liver, brain, and prostate, while there is also a treatment of examining genetic associations. Machine Learning and Medical Imaging is an ideal reference for medical imaging researchers, industry scientists and engineers, advanced undergraduate and graduate students, and clinicians. Key Features:

Demonstrates the application of cutting-edge machine learning techniques to medical imaging problems  
Covers an array of medical imaging applications from computer assisted diagnosis, image guided radiation therapy, landmark detection, imaging genomics, and brain connectomics  
Self-contained chapters with a thorough literature review  
Assesses the development of future machine learning techniques and the further application of existing techniques

Guorong Wu is an Assistant Professor of Radiology and Biomedical Research Imaging Center (BRIC) in the University of North Carolina at Chapel Hill. Dr. Wu received his PhD degree from the Department of Computer Science in Shanghai Jiao Tong University in 2007. After graduation, he worked for Pixelworks and joined University of North Carolina at Chapel Hill in 2009. Dr. Wu's research aims to develop computational tools for biomedical imaging analysis and computer assisted diagnosis. He is interested in medical image processing, machine learning and pattern recognition. He has published more than 100 papers in the international journals and conferences. Dr. Wu is actively involved in the development of medical image processing software to facilitate the scientific research on neuroscience and radiology therapy. Dinggang Shen is a Professor of Radiology, Biomedical Research Imaging Center (BRIC), Computer Science, and Biomedical Engineering in the University of North Carolina at Chapel Hill (UNC-CH). He is currently directing the Center for Image Informatics and Analysis, the Image Display, Enhancement, and Analysis (IDEA) Lab in the Department of Radiology, and also the medical image analysis core in the BRIC. He was a tenure-track assistant professor in the University of Pennsylvania (UPenn), and a faculty member in the Johns Hopkins University. Dr. Shen's research interests

include medical image analysis, computer vision, and pattern recognition. He has published more than 700 papers in the international journals and conference proceedings. He serves as an editorial board member for six international journals. He has served in the Board of Directors, The Medical Image Computing and Computer Assisted Intervention (MICCAI) Society, in 2012-2015. Mert Sabuncu is an Assistant Professor in Electrical and Computer Engineering, with a secondary appointment in Biomedical Engineering, Cornell University. His research interests are in biomedical data analysis, in particular imaging data, and with an application emphasis on neuroscience and neurology. He uses tools from signal/image processing, probabilistic modeling, statistical inference, computer vision, computational geometry, graph theory, and machine learning to develop algorithms that allow learning from large-scale biomedical data.

[Download to continue reading...](#)

Machine Learning and Medical Imaging (Elsevier and Micca Society) Portal Hypertension: Diagnostic Imaging and Imaging-Guided Therapy (Medical Radiology / Diagnostic Imaging) Medical Terminology Online with Elsevier Adaptive Learning for Quick & Easy Medical Terminology (Access Code and Textbook Package), 8e Medical Terminology Online with Elsevier Adaptive Learning for Exploring Medical Language (Access Card), 10e Machine Learning: A Probabilistic Perspective (Adaptive Computation and Machine Learning series) Introduction to Machine Learning (Adaptive Computation and Machine Learning series) Machine Learning: For Beginners: Definitive Guide for Neural Networks, Algorithms, Random Forests and Decision Trees Made Simple (Machine Learning, Book 1) Machine Learning: An Algorithmic Perspective, Second Edition (Chapman & Hall/Crc Machine Learning & Pattern Recognition) Medical Terminology: Medical Terminology Easy Guide for Beginners (Medical Terminology, Anatomy and Physiology, Nursing School, Medical Books, Medical School, Physiology, Physiology) Medical Terminology: Medical Terminology Made Easy: Breakdown the Language of Medicine and Quickly Build Your Medical Vocabulary (Medical Terminology, Nursing School, Medical Books) BREAD MACHINE COOKBOOK: 120 Most Delicious Bread Machine Recipes (bread, bread bible, bread makers, breakfast, bread machine cookbook, bread baking, bread making, healthy, healthy recipes) Medical Terminology & Anatomy for ICD-10 Coding - Text and Elsevier Adaptive Learning Package, 3e Medical Terminology Online with Elsevier Adaptive Learning for The Language of Medicine (Access Code and Textbook Package), 11e Exploring Medical Language - Text and Elsevier Adaptive Learning Package, 10e Medical Terminology Online with Elsevier Adaptive Learning for The Language of Medicine (Access Card), 11e Patient Care in Imaging Technology (Basic Medical Techniques and Patient Care in Imaging Technol) The Human Genome, Second Edition: A User's Guide (Elsevier Science in Society) The

Patient's Medical Journal: Record Your Personal Medical History, Your Family Medical History, Your Medical Visits & Treatment Plans American Medical Association Complete Medical Encyclopedia (American Medical Association (Ama) Complete Medical Encyclopedia) Learning Vascular and Interventional Radiology (Learning Imaging)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)