Record Nr. UNINA9910162740003321 Autore Zhou S. Titolo Deep learning for medical image analysis / / edited by Kevin Zhou, Hayit Greenspan, Dinggang Shen London, England:,: Academic Press,, 2017 Pubbl/distr/stampa ©2017 **ISBN** 0-12-810409-0 0-12-810408-2 Edizione [First edition.] Descrizione fisica 1 online resource (460 pages): illustrations, photographs Disciplina 616.07540285 Soggetti Diagnostic imaging - Data processing Image analysis Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references at the end of each chapters and Nota di bibliografia Nota di contenuto Introduction -- Medical Image Detection and recognition -- Medical image segmentation -- Medical image registration -- Computer-aided diagnosis and disease quantification -- Others. Deep learning is providing exciting solutions for medical image analysis Sommario/riassunto problems and is seen as a key method for future applications. This book gives a clear understanding of the principles and methods of neural network and deep learning concepts, showing how the algorithms that integrate deep learning as a core component have been applied to medical image detection, segmentation and registration, and computer-aided analysis, using a wide variety of application areas. Deep Learning for Medical Image Analysis is a great learning resource for academic and industry researchers in medical imaging analysis, and for graduate students taking courses on machine learning and deep learning for computer vision and medical image computing and analysis. Covers common research problems in medical image analysis and their challenges Describes deep learning methods and the theories behind approaches for medical image analysis Teaches how algorithms

are applied to a broad range of application areas, including Chest X-ray, breast CAD, lung and chest, microscopy and pathology, etc.

Includes a Foreword written by Nicholas Ayache