

1. Record Nr.	UNINA9910831008503321
Titolo	Data Driven Approaches on Medical Imaging // edited by Bin Zheng, Stefan Andrei, Md Kamruzzaman Sarker, Kishor Datta Gupta
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2023
ISBN	3-031-47772-3
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (236 pages)
Disciplina	616.07540285
Soggetti	Image processing Medical informatics Biomedical engineering Computer vision Image Processing Health Informatics Medical and Health Technologies Computer Vision
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter. 1. Introduction of Medical Imaging Modalities -- Chapter. 2. Introduction to Medical Imaging Informatics -- Chapter. 3. Active Learning on Medical Image -- Chapter. 4. Few Shot Learning for Medical Imaging: A Comparative Analysis of Methodologies and Formal Mathematical Framework -- Chapter. 5. AUTOML Systems for Medical Imaging -- Chapter. 6. Online learning for X-ray, CT or MRI -- Chapter. 7. Invariant Scattering Transform for Medical Imaging -- Chapter. 8. Generative Adversarial Networks for Data Augmentation -- Chapter. 9. Bias, Ethical concerns, and explainable decision-making in medical imaging research -- Chapter. 10. Case Studies on X-Ray Imaging, MRI and Nuclear Imaging -- Index.
Sommario/riassunto	This book deals with the recent advancements in computer vision techniques such as active learning, few-shot learning, zero shot learning, explainable and interpretable ML, online learning, AutoML etc. and their applications in medical domain. Moreover, the key challenges which affect the design, development, and performance of medical

imaging systems are addressed. In addition, the state-of-the-art medical imaging methodologies for efficient, interpretable, explainable, and practical implementation of computer imaging techniques are discussed. At present, there are no textbook resources that address the medical imaging technologies. There are ongoing and novel research outcomes which would be useful for the development of novel medical imaging technologies/processes/equipment which can improve the current state of the art. The book particularly focuses on the use of data driven new technologies on medical imaging vision such as Active learning, Online learning, few shot learning, AutoML, segmentation etc.
