

# Applications of Parallel Data Processing for Biomedical Imaging

Part of the Advances in Bioinformatics and Biomedical Engineering Book Series

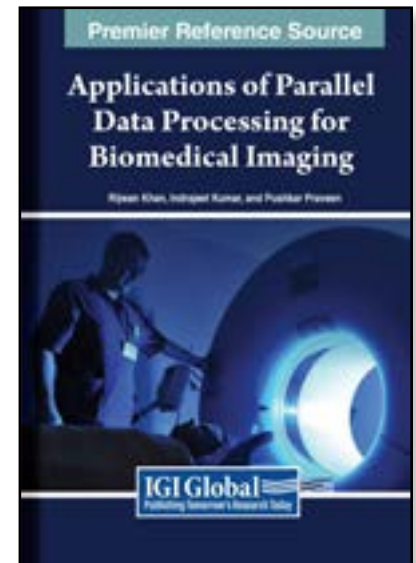
Rijwan Khan (School of Computing, Galgotias University, G.B. Nagar, India), Indrajeet Kumar (Department of CSE, Graphic Era Hill University, India) and Pushkar Praveen (G.B Pant Institute of Engineering and Technology, India)

## Description:

Despite the remarkable progress witnessed in the last decade in big data utilization and parallel processing techniques, a persistent disparity exists between the capabilities of computer-aided diagnosis systems and the intricacies of practical healthcare scenarios. This disconnection is particularly evident in the complex landscape of artificial intelligence (AI) and IoT innovations within the biomedical realm. The need to bridge this gap and explore the untapped potential in healthcare and biomedical applications has never been more crucial. As we navigate through these challenges, **Applications of Parallel Data Processing for Biomedical Imaging** offers insights and solutions to reshape the future of biomedical research.

The objective of **Applications of Parallel Data Processing for Biomedical Imaging** is to bring together researchers from both the computer science and biomedical research communities. By showcasing state-of-the-art deep learning and large data analysis technologies, the book provides a platform for the cross-pollination of ideas between AI-based and traditional methodologies. The collaborative effort seeks to have a substantial impact on data mining, AI, computer vision, biomedical research, healthcare engineering, and other related fields. This interdisciplinary approach positions the book as a cornerstone for scholars, professors, and professionals working in software and medical fields, catering to both graduate and undergraduate students eager to explore the evolving landscape of parallel computing, artificial intelligence, and their applications in biomedical research.

The topics covered in the book span a diverse range, including heterogeneous computing, biological and molecular computing, AI applications in biomedical imaging, big data processing, and future network architectures for parallel processing. Readers will delve into the frontiers of AI and deep learning in medicine, human biology, and healthcare, exploring machine learning and deep learning-based clinical decision-making systems, biomedical imaging, medical and healthcare education, and more. The book acts as a beacon for those intrigued by the possibilities at the intersection of big data, intelligent IoT, and parallel computing in reshaping the landscape of healthcare, bioinformatics, biomechanics, and biomedical services.



**ISBN:** 9798369324264

**Pages:** 310

**Copyright:** 2024

**Release Date:** June, 2024

**Hardcover:** \$415.00

**E-Book:** \$415.00

**Hardcover +  
E-Book:** \$500.00

## Topics Covered:

- AI in Healthcare and Biomedical Imaging
- Computer Vision for Medical Images
- AI in Big Data Processing
- AI in Biomedical Imaging Applications
- Big Data Analytics for Healthcare
- Big Data in Biomedical Services
- IoT for Smart Healthcare
- Smart Computing in Bioinformatics
- Molecular Computing
- Deep Learning in Biomedical Imaging
- Distributed Systems in Healthcare
- Future Network Architectures for Parallel Processing
- Heterogeneous Computing
- Intelligent Devices for Healthcare Services
- Process-Aware Information Systems in Healthcare

**Subject:** Security and Forensics

**Classification:** Edited Reference

**Readership Level:** Advanced-Academic Level  
(Research Recommended)

**Research Suitable for:** Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

### Order Information

Phone: 717-533-8845 x100

Toll Free: 1-866-342-6657

Fax: 717-533-8661 or 717-533-7115

Online Bookstore: [www.igi-global.com](http://www.igi-global.com)

Mailing Address: 701 East Chocolate Avenue, Hershey, PA 17033, USA