1. Record Nr. UNINA9910872197303321 Autore Aluvalu Rajanikanth Titolo Explainable AI in Health Informatics / / edited by Rajanikanth Aluvalu, Mayuri Mehta, Patrick Siarry Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 9789819737055 9789819737048 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (287 pages) Collana Computational Intelligence Methods and Applications, , 2510-1773 Altri autori (Persone) MehtaMayuri SiarryPatrick Disciplina 006.3 Soggetti Artificial intelligence Medical informatics Biomedical engineering Artificial Intelligence **Health Informatics** Medical and Health Technologies Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Chapter 1. Introduction to Explainable AI -- Chapter 2. Explainable AI Methods and Applications -- Chapter 3. Unveil the Black Box Model for Healthcare Explainable AI -- Chapter 4. Explainable AI: Methods, Frameworks, and Tools for Healthcare 5.0 -- Chapter 5. Explainable Al in Disease Diagnosis -- Chapter 6. Explainable Artificial Intelligence in Drug Discovery -- Chapter 7. Explainable AI for Big Data Control --Chapter 8. Patient Data Analytics using XAI- Existing Tools & Case Studies -- Chapter 9. Enhancing Diagnosis of Kidney Ailments from CT Scan with Explainable AI -- Chapter 10. Explainable AI for Colorectal Cancer Classification -- Chapter 11. Explainable AI (XAI)-based Robot-Assisted Surgical classification Procedure -- Chapter 12. Explainable Al Case Studies in Healthcare. Sommario/riassunto This book provides a comprehensive review of the latest research in the area of explainable artificial intelligence (XAI) in health informatics. It

focuses on how explainable AI models can work together with humans to assist them in decision-making, leading to improved diagnosis and

prognosis in healthcare. This book includes a collection of techniques and systems of XAI in health informatics and gives a wider perspective about the impact created by them. The book covers the different aspects, such as robotics, informatics, drugs, patients, etc., related to XAI in healthcare. The book is suitable for both beginners and advanced AI practitioners, including students, academicians, researchers, and industry professionals. It serves as an excellent reference for undergraduate and graduate-level courses on AI for medicine/healthcare or XAI for medicine/healthcare. Medical institutions can also utilize this book as reference material and provide tutorials to medical professionals on how the XAI techniques can contribute to trustworthy diagnosis and prediction of the diseases.