

1. Record Nr.	UNINA9910838276603321
Autore	Raza Khalid
Titolo	Artificial Intelligence and Autoimmune Diseases : Applications in the Diagnosis, Prognosis, and Therapeutics // edited by Khalid Raza, Surender Singh
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819990290 9819990297
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (335 pages)
Collana	Studies in Computational Intelligence, , 1860-9503 ; ; 1133
Altri autori (Persone)	Surender Singh
Disciplina	006.3
Soggetti	Computational intelligence Artificial intelligence Medical informatics Quantitative research Computational Intelligence Artificial Intelligence Health Informatics Data Analysis and Big Data
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Autoimmune Disorders: Types, Symptoms and Risk Factors -- Immune System and Autoimmunity: Cellular and Molecular Mechanisms -- Autoimmune Diseases: Recent Insights on Epidemiology, Pathogenesis and Prevalence Rate -- The Role of Artificial Intelligence and Machine learning in Autoimmune Disorders -- Autoimmune Autonomic Disorder: AI-based Diagnosis and Prognosis -- Detection of Rheumatoid Arthritis using CNN in Autoimmune Diseases Disorders -- The Emerging Applications of Machine Learning in the Diagnosis of Multiple Sclerosis -- Exploring State-of-the-art CNN Models for Early Detection of Multiple Sclerosis using MRI Images -- AI-assisted Model for Risk Detection of Autoimmune Diseases -- Artificial Intelligence in the Diagnosis and Treatment of Rheumatoid Arthritis: Current Status and Future Perspectives -- Data Analytics for Diagnosis, Tracking, and Treatment Planning in Autoimmune Diseases using AI -- Role of

Artificial Intelligence in the Treatment Management of Psoriatic Arthritis -- Artificial Intelligence, Machine Learning and Deep Learning in the Diagnosis and Treatment of Rheumatoid Arthritis: Case Studies -- Artificial Intelligence and Machine Learning Techniques in the Diagnosis of Type I Diabetes: Case Studies -- Computational Intelligence Methods for Biomarkers Discovery in Autoimmune Diseases: Case Studies -- AI-empowered Prediction of Prognosis and Treatment Response in Rheumatoid arthritis.

Sommario/riassunto

The book provides an overview of various autoimmune disorders and how artificial intelligence (AI) and machine learning will be used for the diagnosis, prognosis, and treatment of these disorders. AI algorithms are used to create synthetic patient populations with the properties of actual patient cohorts, build personalized predictive models of drug combinations and unravel complex relationships between diet, microbiome, and genetic line-up to determine the comparative treatment response. The book highlights clinical applications and challenges of AI for the diagnosis and treatment/management of autoimmune disorders which includes Rheumatoid Arthritis (RA), Multiple Sclerosis (MS), Type I Diabetes, Psoriatic Arthritis (PsA), and other critical diseases.
