

1. Record Nr.	UNINA9910488697903321
Titolo	Intelligent healthcare : applications of AI in eHealth // Surbhi Bhatia [and four others], editors
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-67051-1
Descrizione fisica	1 online resource (328 pages)
Collana	EAI/Springer Innovations in Communication and Computing
Disciplina	610.28563
Soggetti	Artificial intelligence - Medical applications Artificial intelligence - Methodology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Acknowledgment -- Contents -- A Healthcare-Based Intelligent Monitoring Paradigm in Quantum Dot Cellular Automata (QCA) to Protect Against Novel Corona Outbreak -- 1 Introduction -- 2 Background -- QCA Concept -- Associative Memory Computation -- CAM Approach Towards Confinement of Associative Memory -- 3 QCA Circuits -- Fundamental Gates -- Memory Cell Structures -- Five-Input Minority Gate -- Five-Input Minority Gate-Based Multilayer CAM Cell -- 4 Scope -- 5 Proposed Paradigm of Healthcare Monitoring -- 6 Entire Operation for Process Flow of Implemented Design in Quantum Dot Cellular Automata (QCA) Nanotechnology -- 7 Results -- 8 Conclusion -- References -- Intelligent Healthcare -- 1 Introduction -- 2 Research Method -- 3 Labelling or Classification of Vital-Sign Data -- Existing One-Class Classification (OCC) Methods -- Existing Two-Class Classification (TCC) Methods -- 4 Results -- Graphical Analysis of Measurement of Systolic, Diastolic and Pulse Rate Parameters -- 5 Discussion -- 6 Conclusion -- References -- Big Data -- 1 Introduction -- 2 Recommendation System and Its Basic Concepts -- Phases of Recommendation System -- Information Collection Phase -- Methodism -- 3 Health Recommendation System -- Designing the Health Recommendation System -- Framework for HRS -- Methods to Design HRS -- Evaluation of HRS -- 4 Proposed Intelligent-Based HRS -- Big Data Analytics and

Intelligence Healthcare Perspectives -- Architectural Outline Designed for Big Data Analytics in Health Care -- 5 Intelligence-Based Health Approval Classification via Big Data Analytics -- 6 Enhancing Workflows in Healthcare -- 7 Healthcare Knowledge Bases -- Making Better Doctors -- Optimization -- Diagnosing Disease -- Drug Discovery -- 3D Printing -- Bioprinting and Tissue Engineering -- Drug and Facilities -- Gene Care.

The Virtual and Growing Reality -- Health Treatment and Delivery -- Internet and Classroom Meetings -- Logging In -- Supply Chain Verification -- Entry to Medical Record -- Robot Movement -- Surgery with Robotic Aid -- Drones -- Intelligent Locations -- Hospitals Intelligent -- 8 Advantages and Disadvantages of the Proposed Health Recommendation System Using Big Data Analytics -- 9 Conclusion and Future Research -- References -- Implication of Statistical Methods on Patient Data: An Approach for Cancer Survivability Prediction -- 1

Introduction -- 2 Cancer Statistics -- Breast Cancer -- Ovarian Cancer -- 3 Basics of Survival Analysis -- Censoring -- Hazard Function -- Linear Regression and Its Limitations -- 4 Popular Survival Analysis Method -- Kaplan-Meier -- Log-Rank Test -- Cox Regression --

Random Forest Model -- 5 Result and Discussion -- Data Preparation -- Survival Analysis Using Kaplan-Meier (KM) -- Survival Analysis Using Cox Regression -- 6 Conclusion -- References -- Machine Learning

with IoT and Big Data in Healthcare -- 1 Introduction -- 2 Background -- 3 Machine Learning -- Application Areas of Machine Learning in Intelligent Healthcare -- Advantages of Machine Learning -- 4 Big Data in Healthcare -- Big Data Characteristics for Intelligent Healthcare -- Stages of Big Data Analytics -- 5 IoT in Healthcare -- IoT Application Areas in Healthcare -- IoT Offers Following Advantages in Healthcare -- 6 Challenges -- 7 Solutions and Recommendations -- 8 Future Work -- 9 Conclusion -- References -- Modelling Covid-19: Transmission

Dynamics Using Machine Learning Techniques -- 1 Background -- 2 Objective -- 3 Methodology -- 4 Results -- 5 Conclusion -- References -- An Innovative Pandemic Knowledgebase Using Machine Learning -- 1 Introduction -- 2 Historical Analysis of Epidemic and Pandemic -- 3 COVID - 19: Pandemic.

4 Data Analytics and Knowledgebase -- 5 Novel Case Studies -- International -- National -- 6 Rule-Based Learning in Healthcare Using Pandemic Knowledgebase -- 7 Conclusion -- References -- Reviewing

Classification Methods on Health Care -- 1 Introduction to Supervised Learning -- Different Supervised Learning Methods -- Comparative Summary of Supervised Methods -- 2 Applications of Supervised Learning in Healthcare -- 3 Healthcare Datasets Used in the Study -- 4 Classification Metrics -- 5 Methodology -- 6 Results and Analysis -- 7 Conclusion and Future Work -- References -- Predicting and Managing

Glycemia Levels Using Advanced Time Series Forecasting Methods -- 1 Introduction -- 2 Background Study -- Defining Time Series and Related Terms -- Various Researchers' Study on Time Series Analysis for Diabetes -- 3 Methodology -- Augmented Dickey-Fuller Test -- ACF and PACF Plots -- Techniques Applied for Time Series Analysis -- ARIMAX -- fbProphet -- Forecasting -- Evaluation Using Mean Absolute Error (MAE) -- 4 Experiment Results and Analysis -- Data Extraction -- Data Preparation -- ARIMAX Model Training -- ADF -- ACF and PACF -- Prophet Model -- Forecasting Model -- Interpreting the Results -- 5 Conclusion and Future Trends -- References --

Machine Learning Applications in Anti-cancer Drug Discovery -- 1 Introduction -- 2 Background -- Drug Repurposing -- Cancer Classification -- Drug Synergy Prediction -- 3 Research Gaps in Computational Drug Discovery -- 4 Future of Computational Drug

Discovery -- Deep Learning for Drug Discovery -- Role of Deep Learning in Cancer Classification -- Role of Deep Learning in MicroRNA Analysis in NGS -- 5 Conclusion and Future Directions -- References -- Deep Learning in Healthcare -- 1 Introduction -- 2 Deep Convolution Neural Network (CNNs) in Healthcare -- 3 Deep Learning for Genomics -- 4 Deep Learning in Medicine.

Electronic Health Record Data -- ICD-10 Codes -- Probabilistic Diagnoses with Bayesian Networks -- 5 Machine Learning for Microscopy -- Deterministic Super-Resolution Microscopy -- Stochastic Super-Resolution Microscopy -- 6 Natural Language Processing in Healthcare -- 7 Prediction Using EHR -- 8 Deep Learning Support in Healthcare -- 9 Applications of ML in Healthcare -- 10 Applications of ML in Clinical Workflows -- 11 Secure, Private, and Robust ML for Healthcare Solutions -- Data Protection-ML: ML -- 12 Conclusion -- References -- Self-Organized Deep Learning: A Novel Step to Fight Against Severe Acute Respiratory Syndrome -- 1 Introduction -- Overall Theme -- 2 Background -- Contextual Feature of the Book Chapter -- Need of Telemedicine for COVID-19 -- Previous Work -- 3 Working of Proposed Model -- 4 Deep Analysis -- 5 Conclusion -- References -- Clustering Algorithms in Healthcare -- 1 Introduction -- 2 Clustering -- K-Means Clustering -- K-Means Clustering Algorithm -- Mean-Shift Clustering Algorithm -- DBSCAN Clustering -- Expectation-Maximization (EM) Clustering Using Gaussian Mixture Models (GMM) -- Hierarchical Agglomerative Clustering -- 3 Experimental Analysis -- Performance Analysis -- 4 Conclusions -- References -- Multimodal Detection of COVID-19 Fake News and Public Behavior Analysis-Machine Learning Prospective -- 1 Introduction -- 2 Related Works -- 3 About COVID-19 Fake News -- 4 Methodology -- Multimodal Classifiers (MC) -- Support Vector Machines (SVM) -- Stochastic Gradient Descent (SGD) -- Gradient Boosting (GB) -- Bounded Decision Trees (BDT) -- Random Forests (RF) -- 5 Implementation Results -- 6 Conclusion -- 7 Future Scope -- References -- A Review of Machine Learning Approaches in Clinical Healthcare -- 1 Introduction -- 2 Applied Machine Learning in Healthcare -- 3 The Ethics of Using Algorithms in Healthcare. 4 Current Machine Learning Healthcare Applications -- 5 Machine Learning Algorithms -- 6 Future Possibilities in General Practice -- 7 Challenges -- Risks/Threats -- 8 Conclusion -- References -- Coronavirus Pandemic: A Review of a New-fangled Risk to Public Health -- 1 Introduction -- 2 Virion Structure -- 3 Objective -- 4 Methodology of Review -- 5 Epidemiology of COVID-19 -- 6 Total Coronavirus Cases -- 7 Transmission -- 8 Diagnosis -- 9 Prevention of Transmission -- 10 Quarantine -- 11 Treatment -- 12 Application of Nanotechnology to Combat Against Coronavirus -- Diagnosis and Treatment of CoV by Nanomaterials -- Nanomaterials for Facemasks Production -- Nanomaterials for Disinfectants -- Anti-COVID-19 Nanocoating -- 13 Conclusions -- References -- Impact of COVID-19 Pandemic on Obese and Asthma Patients: A Systematic Review -- 1 Introduction -- 2 Conjunction of COVID-19 and Asthma -- Effects of COVID-19 in Asthma Patients -- Symptoms of COVID-19 in Asthma Patients -- Precautions and Measures to Be Taken by Asthma Patients Against COVID-19 -- 3 A Conjunction of COVID-19 and Obesity -- Effects of COVID-19 in Obese Patients -- Symptoms of COVID-19 in Obese Patients -- Precautions and Measures to Be Taken by Obese Patients Against COVID-19 -- 4 Conclusion -- References -- Case Study on COVID-19 Scenario over Highly Affected States of India -- 1 Introduction -- 2 Specific Healthcare Problems/Difficulties in Indian States -- Healthcare Facilities and Challenges in Maharashtra to Take

Care of COVID-19 Scenario in Maharashtra -- Healthcare Facilities and Challenges in Tamil Nadu to Take Care of COVID-19 Scenario -- Healthcare Facilities and Challenges in Delhi to Take Care of COVID-19 Scenario -- Healthcare Facilities and Challenges in Gujarat to Take Care of COVID-19 Scenario.
Healthcare Facilities and Challenges in Rajasthan to Take Care of COVID-19 Scenario.
