1. Record Nr. UNINA9910627248403321

Autore	Sevakula Rahul Kumar
Titolo	Improving Classifier Generalization : Real-Time Machine Learning based Applications / / by Rahul Kumar Sevakula, Nishchal K. Verma
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-19-5073-3
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (181 pages)
Collana	Studies in Computational Intelligence, , 1860-9503 ; ; 989
Disciplina	629.8
Soggetti	Machine learning Computational intelligence Pattern recognition systems Machine Learning Computational Intelligence Automated Pattern Recognition
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to classification algorithms -- Methods to improve generalization performance -- MVPC – a classifier with very low VC dimension -- Framework for reliable fault detection with sensor data -- Membership functions for Fuzzy Support Vector Machine in noisy environment -- Stacked Denoising Sparse Autoencoder based Fuzzy rule classifiers -- Epilogue.
Sommario/riassunto	This book elaborately discusses techniques commonly used to improve generalization performance in classification approaches. The contents highlight methods to improve classification performance in numerous case studies: ranging from datasets of UCI repository to predictive maintenance problems and cancer classification problems. The book specifically provides a detailed tutorial on how to approach time-series classification problems and discusses two real time case studies on condition monitoring. In addition to describing the various aspects a data scientist must consider before finalizing their approach to a classification problem and reviewing the state of the art for improving classification generalization performance, it also discusses in detail the authors own contributions to the field, including MVPC - a classifier

		with very low VC dimension, a graphical indices based framework for reliable predictive maintenance and a novel general-purpose membership functions for Fuzzy Support Vector Machine which provides state of the art performance with noisy datasets, and a novel scheme to introduce deep learning in Fuzzy Rule based classifiers (FRCs). This volume will serve as a useful reference for researchers and students working on machine learning, health monitoring, predictive maintenance, time-series analysis, gene-expression data classification. .
2.	Record Nr.	UNINA9910966760203321
	Titolo	Innovation and invention in medical devices : workshop summary / / Kathi E. Hanna ... [et al.] editors ; based on a workshop of the Roundtable on Research and Development of Drugs, Biologics, and Medical Devices, Board on Health Sciences Policy, Institute of Medicine
	Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 2001
	ISBN	0-309-18320-0 1-280-18409-4 9786610184095 0-309-56588-X
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (112 p.)
	Collana	Compass series
	Altri autori (Persone)	HannaKathi E
	Disciplina	681
	Soggetti	Medical instruments and apparatus Medical innovations
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	""Innovation and Invention In Medical Devices""; ""Copyright""; ""Preface""; ""Contents""; ""1 Introductory Overview ""; ""OVERVIEW""; ""CHALLENGES TO INNOVATION""; ""REGULATORY ISSUES""; ""PAYMENT ISSUES""; ""VALUE AND CONSEQUENCES FOR INNOVATION""; ""CONCLUSIONS""; ""2 Keynote Session ""; ""HISTORICAL PERSPECTIVE ON IOM'S ROLE IN PROVIDING A FORUM FOR DISCUSSION""; ""A

Sommario/riassunto

The objective of the workshop that is the subject of this summary report was to present the challenges and opportunities for medical devices as perceived by the key stakeholders in the field. The agenda, and hence the summaries of the presentations that were made in the workshop and which are presented in this summary report, was organized to first examine the nature of innovation in the field and the social and economic infrastructure that supports such innovation. The next objective was to identify and discuss the greatest unmet clinical needs, with a futuristic view of technologies that might meet those needs. And finally, consideration was given to the barriers to the application of new technologies to meet clinical needs.