1. Record Nr.	UNINA9910726276903321
Autore	Farahani Hojjatollah
Titolo	An Introduction to Artificial Psychology [[electronic resource]] : Application Fuzzy Set Theory and Deep Machine Learning in Psychological Research using R / / by Hojjatollah Farahani, Marija Blagojevi, Parviz Azadfallah, Peter Watson, Forough Esrafilian, Sara Saljoughi
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	9783031311727
	9783031311710
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (262 pages)
Altri autori (Persone)	BlagojeviMarija
	AzadfallahParviz
	WatsonPeter
	EsrafilianForough
	SaljoughiSara
Disciplina	150.72
Soggetti	Psychology
	Cognitive psychology
	Cognitive science
	Machine learning
	Artificial intelligence
	Behavioral Sciences and Psychology
	Cognitive Psychology
	Cognitive Science
	Machine Learning
	Artificial Intelligence
	Intel·ligència artificial
	Psicologia cognitiva
	Aprenentatge automàtic
	Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Nota di contenuto	Introduction Chapter 1: After Method -- Chapter 2: Overview on Mathematical Basis of Fuzzy Set Theory. - Chapter 3: Fuzzy Inference Systems (FIS) -- Chapter 4: Fuzzy Cognitive Maps(FCM) -- Chapter 5: Network analysis -- Chapter 6: Association Rules Mining and Associative Classification -- Chapter 7: Artificial Neural Network -- Chapter 8: Feature Selection -- Chapter 9: Cluster analysis.
Sommario/riassunto	Artificial Psychology (AP) is a highly multidisciplinary field of study in psychology. AP tries to solve problems which occur when psychologists do research and need a robust analysis method. Conventional statistical approaches have deep rooted limitations. These approaches are excellent on paper but often fail to model the real world. Mind researchers have been trying to overcome this by simplifying the models being studied. This stance has not received much practical attention recently. Promoting and improving artificial intelligence helps mind researchers to find a holistic model of mental models. This development achieves this goal by using multiple perspectives and multiple data sets together with interactive, and realistic models. In this book, the methodology of approximate inference in psychological research from a theoretical and practical perspective has been considered. Quantitative variable-oriented methodology and qualitative case-oriented methods are both used to explain the set-oriented methodology and this book combines the precision of quantitative methods with information from qualitative methods. This is a book that many researchers can use to expand and deepen their psychological research and is a book which can be useful to postgraduate students. The reader does not need an in-depth knowledge of mathematics or statistics because statistical and mathematical intuitions are key here and they will be learned through practice. What is important is to understand and use the new application of the methods for finding new, dynamic and realistic interpretations. This book incorporates theoretical fuzzy inference and deep machine learning algorithms in practice. This is the kind of book that we wished we had had when we were students. This book covers at least some of the most important issues in mind research including uncertainty, fuzziness, continuity, complexity and high dimensionality which are inherent to mind data. These are elements of artificial psychology. This book implements models using R software.