1.	Record Nr.	UNINA9910734092803321
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	Titolo	Lectures on Intelligent Systems / / by Leonardo Vanneschi, Sara Silva
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
	ISBN	3-031-17922-6
	Edizione	[1st ed. 2023.]
	Descrizione fisica	1 online resource (352 pages)
	Collana	Natural Computing Series, , 2627-6461
	Disciplina	060 006.3
	Soggetti	Artificial intelligence Artificial Intelligence
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	Chapter 1: Introduction -- Chapter 2: Optimization Problems and Local Search -- Chapter 3: Genetic Algorithms -- Chapter 4: Particle Swarm Optimization -- Chapter 5: Introduction to Machine Learning -- Chapter 6: Decision Tree Learning -- Chapter 7: Artificial Neural Networks -- Chapter 8: Genetic Programming -- Bayesian Learning -- Chapter 10: Support Vector Machines -- Chapter 11: Ensemble Methods -- Chapter 12: Unsupervised Learning.
	Sommario/riassunto	This textbook provides the reader with an essential understanding of computational methods for intelligent systems. These are defined as systems that can solve problems autonomously, in particular problems where algorithmic solutions are inconceivable for humans or not practically executable by computers. Despite the rapidly growing applications in this field, the book avoids application details, instead focusing on computational methods that equip the reader with the methodological tools and competencies necessary to tackle current and future complex applications. The book consists of two parts: computational intelligence methods for optimization, and machine learning. Part I begins with the concept of optimization, and introduces local search algorithms, genetic algorithms, and particle swarm optimization. Part II begins with an introduction to machine learning and covers several methods, many of which can be used as supervised learning algorithms, such as decision tree learning, artificial neural

networks, genetic programming, Bayesian learning, support vector machines, and ensemble methods, plus a discussion of unsupervised learning. This textbook is written in a self-contained style, suitable for undergraduate or graduate students in computer science and engineering, and for self-study by researchers and practitioners.