1. Record Nr. UNINA9910746070603321

Autore	Yan Wei Qi
Titolo	Computational Methods for Deep Learning : Theory, Algorithms, and Implementations / / by Wei Qi Yan
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-9948-23-1
Edizione	[2nd ed. 2023.]
Descrizione fisica	1 online resource (235 pages)
Collana	Texts in Computer Science, , 1868-095X
Disciplina	005.7
Soggetti	Machine learning Neural networks (Computer science) Computer science - Mathematics Image processing - Digital techniques Computer vision Artificial intelligence Machine Learning Mathematical Models of Cognitive Processes and Neural Networks Mathematics of Computing Computer Imaging, Vision, Pattern Recognition and Graphics Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	1. Introduction -- 2. Deep Learning Platforms -- 3. CNN and RNN -- 4. Autoencoder and GAN -- 5. Reinforcement Learning -- 6. CapsNet and Manifold Learning -- 7. Boltzmann Machines -- 8. Transfer Learning and Ensemble Learning.
Sommario/riassunto	The first edition of this textbook was published in 2021. Over the past two years, we have invested in enhancing all aspects of deep learning methods to ensure the book is comprehensive and impeccable. Taking into account feedback from our readers and audience, the author has diligently updated this book. The second edition of this textbook presents control theory, transformer models, and graph neural networks (GNN) in deep learning. We have incorporated the latest algorithmic advances and large-scale deep learning models, such as

GPTs, to align with the current research trends. Through the second edition, this book showcases how computational methods in deep learning serve as a dynamic driving force in this era of artificial intelligence (AI). This book is intended for research students, engineers, as well as computer scientists with interest in computational methods in deep learning. Furthermore, it is also well-suited for researchers exploring topics such as machine intelligence, robotic control, and related areas.