1. Record Nr. UNINA9910369899703321

Autore	Norris Donald J
Titolo	Machine Learning with the Raspberry Pi : Experiments with Data and Computer Vision / / by Donald J. Norris
Pubbl/distr/stampa	Berkeley, CA : , : Apress : , : Imprint : Apress, , 2020
ISBN	9781484251744 1484251741
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (571 pages)
Collana	Technology in action
Disciplina	006.31
Soggetti	Computer input-output equipment Hardware and Maker
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1: Introduction to Machine Learning (ML) with the Raspberry Pi (RasPi) -- Chapter 2: Exploration of ML data models: Part 1 -- Chapter 3: Exploration of ML data models: Part 2 -- Chapter 4: Preparation for Deep Learning -- Chapter 5: Practical deep learning ANN demonstrations -- Chapter 6: CNN demonstrations -- Chapter 7: Predictions using ANNs and CNNs -- Chapter 8: Predictions using CNNs and MLPs for medical research -- Chapter 9: Reinforcement Learning. .
Sommario/riassunto	Using the Pi Camera and a Raspberry Pi board, expand and replicate interesting machine learning (ML) experiments. This book provides a solid overview of ML and a myriad of underlying topics to further explore. Non-technical discussions temper complex technical explanations to make the hottest and most complex topic in the hobbyist world of computing understandable and approachable. Machine learning, also commonly referred to as deep learning (DL), is currently being integrated into a multitude of commercial products as well as widely being used in industrial, medical, and military applications. It is hard to find any modern human activity, which has not been "touched" by artificial intelligence (AI) applications. Building on the concepts first presented in Beginning Artificial Intelligence with the Raspberry Pi, you'll go beyond simply understanding the concepts of AI into working with real machine learning experiments and applying practical deep learning concepts to experiments with the Pi board and

		computer vision. What you learn with Machine Learning with the Raspberry Pi can then be moved on to other platforms to go even further in the world of AI and ML to better your hobbyist or commercial projects.

2.	Record Nr.	UNINA9910983318303321
	Autore	Lu Huilin
	Titolo	Computational Transport Phenomena of Multiphase Systems and Fluidization : Formulation and Application of Kinetic Theory of Granular Flow / / by Huilin Lu, Guodong Liu, Qinghong Zhang, Xiaoxue Jiang, Boxue Pang, Wenjian Cai
	Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
	ISBN	9789819606986 9819606985
	Edizione	[1st ed. 2025.]
	Descrizione fisica	1 online resource (334 pages)
	Collana	Fluid Mechanics and Its Applications, , 2215-0056 ; ; 127
	Altri autori (Persone)	LiuGuodong ZhangQinghong JiangXiaoxue PangBoxue CaiWenjian
	Disciplina	620.1064
	Soggetti	Fluid mechanics Energy storage Engineering Fluid Dynamics Mechanical and Thermal Energy Storage
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Introduction to Basic Equations and Kinetic Theory of Granular Flow -- CFD-DEM Approach for Fluid-Particles Flow -- Fluid–Solid Two-Phase CFD-KTGF-DEM Approach -- Low-Stokes-Number Kinetic Theory of Granular Flow -- Minimum Rate of Energy Dissipation and Interfacial Momentum Closure of Heterogeneous Flow Structures -- Applications of Computational Fluid Dynamics to Multiphase Flows.

Sommario/riassunto

This book focuses on the modeling of gas-solid, liquid-solid, non-Newtonian fluid-solid, and supercritical fluid-solid fluidized beds and multiphase flows. Simulation techniques are categorized into Euler–Euler with kinetic theory of granular flow (KTGF) and Euler–Lagrange with discrete element method (DEM) approaches. Both the governing equations and numerical implementations are presented. A new CFD-KTGF-DEM approach describes phase interactions, free from the empirical restitution coefficient used in KTGF, and accounts for turbulence effects on discrete particle motion, which DEM cannot achieve. Additionally, a low Stokes number KTGF model is introduced, incorporating the interstitial fluid's effect, unlike the classical KTGF, which assumes vacuum conditions. Special attention is given to momentum exchange between heterogeneous and homogeneous flows in fluidized beds and multiphase systems, and various multiscale drag models are presented. The book also discusses the application of these approaches in fluid-solid fluidized bed reactors and oil-gas drilling processes.