Record Nr. UNINA9910369899903321 Autore Vermeulen Andreas François **Titolo** Industrial Machine Learning: Using Artificial Intelligence as a Transformational Disruptor / / by Andreas François Vermeulen Berkeley, CA:,: Apress:,: Imprint: Apress,, 2020 Pubbl/distr/stampa **ISBN** 9781523150489 1523150483 9781484253168 1484253167 Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (652 pages) 006.3 Disciplina Soggetti Artificial intelligence Big data Artificial Intelligence Big Data 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: Background Knowledge --Chapter 3: Classic Machine Learning -- Chapter 4: Supervised Learning: Using labeled data for Insights -- Chapter 5: Supervised Learning: Advanced Algorithms -- Chapter 6: Unsupervised Learning: Using Unlabeled Data -- Chapter 7: Unsupervised Learning: Neural Network Toolkits -- Chapter 8: Unsupervised Learning: Deep Learning -- Chapter 9: Reinforcement Learning: Using Newly Gained Knowledge for Insights -- Chapter 10: Evolutionary Computing -- Chapter 11: Mechatronics -- Chapter 12: Robotics Revolution -- Chapter 13: Fourth Industrial Revolution (4IR) -- Chapter 14: Industrialized Artificial Intelligence -- Chapter 15: Final Industrialization Project -- Appendix: Reference Material -- . Sommario/riassunto Understand the industrialization of machine learning (ML) and take the first steps toward identifying and generating the transformational disruptors of artificial intelligence (AI). You will learn to apply ML to

> data lakes in various industries, supplying data professionals with the advanced skills required to handle the future of data engineering and

data science. Data lakes currently generated by worldwide industrialized business activities are projected to reach 35 zettabytes (ZB) as the Fourth Industrial Revolution produces an exponential increase of volume, velocity, variety, variability, veracity, visualization, and value. Industrialization of ML evolves from AI and studying pattern recognition against the increasingly unstructured resource stored in data lakes. Industrial Machine Learning supplies advanced, yet practical examples in different industries, including finance, public safety, health care, transportation, manufactory, supply chain, 3D printing, education, research, and data science. The book covers: supervised learning, unsupervised learning, reinforcement learning, evolutionary computing principles, soft robotics disruptors, and hard robotics disruptors. You will: Generate and identify transformational disruptors of artificial intelligence (AI) Understand the field of machine learning (ML) and apply it to handle big data and process the data lakes in your environment Hone the skills required to handle the future of data engineering and data science.