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Disciplina	006.312
Soggetti	Data mining Machine learning Business information services Quantitative research Information technology - Management Information storage and retrieval systems Data Mining and Knowledge Discovery Machine Learning Business Information Systems Data Analysis and Big Data Computer Application in Administrative Data Processing Information Storage and Retrieval
Lingua di pubblicazione	Inglese
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Nota di contenuto	Data Science Technologies in Economics and Finance: A Gentle Walk-In -- Supervised Learning for the Prediction of Firm Dynamics -- Opening the Black Box: Machine Learning Interpretability and Inference Tools with an Application to Economic Forecasting -- Machine Learning for Financial Stability -- Sharpening the Accuracy of Credit Scoring Models with Machine Learning Algorithms -- Classifying Counterparty Sector in EMIR Data -- Massive Data Analytics for Macroeconomic Nowcasting -- New Data Sources for Central Banks -- Sentiment Analysis of Financial News: Mechanics and Statistics -- Semi-supervised Text Mining for

Monitoring the News About the ESG Performance of Companies --  
Extraction and Representation of Financial Entities from Text --  
Quantifying News Narratives to Predict Movements in Market Risk -- Do  
the Hype of the Benefits from Using New Data Science Tools Extend to  
Forecasting Extremely Volatile Assets? -- Network Analysis for  
Economics and Finance: An application to Firm Ownership.

#### Sommario/riassunto

This open access book covers the use of data science, including advanced machine learning, big data analytics, Semantic Web technologies, natural language processing, social media analysis, time series analysis, among others, for applications in economics and finance. In addition, it shows some successful applications of advanced data science solutions used to extract new knowledge from data in order to improve economic forecasting models. The book starts with an introduction on the use of data science technologies in economics and finance and is followed by thirteen chapters showing success stories of the application of specific data science methodologies, touching on particular topics related to novel big data sources and technologies for economic analysis (e.g. social media and news); big data models leveraging on supervised/unsupervised (deep) machine learning; natural language processing to build economic and financial indicators; and forecasting and nowcasting of economic variables through time series analysis. This book is relevant to all stakeholders involved in digital and data-intensive research in economics and finance, helping them to understand the main opportunities and challenges, become familiar with the latest methodological findings, and learn how to use and evaluate the performances of novel tools and frameworks. It primarily targets data scientists and business analysts exploiting data science technologies, and it will also be a useful resource to research students in disciplines and courses related to these topics. Overall, readers will learn modern and effective data science solutions to create tangible innovations for economic and financial applications.