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Descrizione fisica	1 online resource (377 pages)
Collana	Statistics and Computing, , 2197-1706
Disciplina	813
Soggetti	Time-series analysis Statistics - Computer programs Econometrics Python (Computer program language) Machine learning Statistics Time Series Analysis Statistical Software Python Machine Learning Statistics in Business, Management, Economics, Finance, Insurance Anàlisi de sèries temporals Python (Llenguatge de programació) Llibres electrònics
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Time Series Concepts and Python -- 2. Exploratory Time Series Data Analysis -- 3. Stationary Time Series Models -- 4. ARMA and ARIMA Modeling and Forecasting -- 5. Nonstationary Time Series Models -- 6. Financial Time Series and Related Models -- 7. Multivariate Time Series Analysis -- 8. State Space Models and Markov Switching Models -- 9. Nonstationarity and Cointegrations -- 10. Modern Machine Learning Methods for Time Series Analysis.
Sommario/riassunto	This textbook presents methods and techniques for time series analysis

and forecasting and shows how to use Python to implement them and solve data science problems. It covers not only common statistical approaches and time series models, including ARMA, SARIMA, VAR, GARCH and state space and Markov switching models for (non) stationary, multivariate and financial time series, but also modern machine learning procedures and challenges for time series forecasting. Providing an organic combination of the principles of time series analysis and Python programming, it enables the reader to study methods and techniques and practice writing and running Python code at the same time. Its data-driven approach to analyzing and modeling time series data helps new learners to visualize and interpret both the raw data and its computed results. Primarily intended for students of statistics, economics and data science with an undergraduate knowledge of probability and statistics, the book will equally appeal to industry professionals in the fields of artificial intelligence and data science, and anyone interested in using Python to solve time series problems.