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Titolo	Hands-on time series analysis with Python : from basics to bleeding edge techniques / / by B.V. Vishwas, Ashish Patel
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Descrizione fisica	1 online resource (420 pages)
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Nota di contenuto	Chapter 1: Time Series and its Characteristics -- Chapter 2: Data Wrangling and Preparation for Time Series -- Chapter 3: Smoothing Methods -- Chapter 4: Regression Extension Techniques for Time Series -- Chapter 5: Bleeding Edge Techniques -- Chapter 6: Bleeding Edge Techniques for Univariate Time Series -- Chapter 7: Bleeding Edge Techniques for Multivariate Time Series -- Chapter 8: Prophet.
Sommario/riassunto	Learn the concepts of time series from traditional to bleeding-edge techniques. This book uses comprehensive examples to clearly illustrate statistical approaches and methods of analyzing time series data and its utilization in the real world. All the code is available in Jupyter notebooks. You'll begin by reviewing time series fundamentals, the structure of time series data, pre-processing, and how to craft the features through data wrangling. Next, you'll look at traditional time

series techniques like ARMA, SARIMAX, VAR, and VARMA using trending framework like StatsModels and pmdarima. The book also explains building classification models using sktime, and covers advanced deep learning-based techniques like ANN, CNN, RNN, LSTM, GRU and Autoencoder to solve time series problem using Tensorflow. It concludes by explaining the popular framework fbprophet for modeling time series analysis. After reading Hands -On Time Series Analysis with Python, you'll be able to apply these new techniques in industries, such as oil and gas, robotics, manufacturing, government, banking, retail, healthcare, and more. What You'll Learn: • Explains basics to advanced concepts of time series • How to design, develop, train, and validate time-series methodologies • What are smoothing, ARMA, ARIMA, SARIMA,SRIMAX, VAR, VARMA techniques in time series and how to optimally tune parameters to yield best results • Learn how to leverage bleeding-edge techniques such as ANN, CNN, RNN, LSTM, GRU, Autoencoder to solve both Univariate and multivariate problems by using two types of data preparation methods for time series. • Univariate and multivariate problem solving using fbprophet. Who This Book Is For Data scientists, data analysts, financial analysts, and stock market researchers.