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Descrizione fisica	1 online resource (VIII, 186 p.)
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Soggetti	Construction industry - Management Buildings - Design and construction Building materials Valuation Civil engineering Construction Management Building Construction and Design Building Materials Investment Appraisal Civil Engineering
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Introduction to Construction Analytics -- Chapter 2. Construction Forecasting using Univariate Time Series Models -- Chapter 3. Construction Forecasting Using Time-series Volatility Models -- Chapter 4. Construction Forecasting using Multivariate Time Series Models -- Chapter 5. Construction Forecasting Using Recurrent Neural Networks -- Chapter 6. Investment Valuation of Construction Projects Under Uncertainty -- Appendices: Construction time series datasets, including National Highway Construction Cost Index (NHCCI), Federal Highway Construction Spending, Iowa Highway Construction.
Sommario/riassunto	This text covers R program coding for the implementation of two essential data analytics for practical construction problems. The first

part of this book explains time series basics, models, and forecasting approaches in the context of the construction industry, accompanied by practical examples in construction. The second part describes the concept of investment valuation for construction projects and provides both deterministic and probabilistic techniques to conduct investment valuation on construction projects. R code scripts are provided in this book for solving practical problems in the construction industry. This book is also equipped with an R Package entitled "cdar" to provide the necessary functions for performing investment valuation. The book maximizes students' understanding of the necessary theoretical background of data analytics, and explains the implementation of data analytics techniques to solve the actual problems in the construction industry. Illustrates theoretical explanations of construction analytics, hands-on practices, and R codes for analytics techniques; Enables readers to investigate the problems in the construction industry such as cost overruns and investment timing; Reinforces concepts presented with problems and solutions, datasets, and programming codes.