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Nota di contenuto	Frontmatter -- Contents -- Preface -- About the Author -- PART I Machine Learning from Multiple Perspectives -- CHAPTER 1 Overview of Data Science -- CHAPTER 2 Introduction to Machine Learning -- CHAPTER 3 Systems Theory, Linear Algebra, and Analytics Basics -- CHAPTER 4 "Modern" Machine Learning -- PART II Systems Analytics -- CHAPTER 5 Systems Theory Foundations of Machine Learning -- CHAPTER 6 State Space Model and Bayes Filter -- CHAPTER 7 The Kalman Filter for Adaptive Machine Learning -- CHAPTER 8 The Need for Dynamical Machine Learning: The Bayesian Exact Recursive Estimation -- CHAPTER 9 Digital Twins -- Epilogue A New Random Field Theory -- Index
Sommario/riassunto	This book introduces the concepts of data science to professionals in engineering, physics, mathematics, and allied fields. It is a workbook with MATLAB code that creates a common framework and points out various interconnections related to industry. This will allow the reader to connect previous subject knowledge to data science, machine learning, or analytics and apply it to IoT applications. Part One brings together subjects in machine learning, systems theory, linear algebra, digital signal processing, and probability theory. Part Two (Systems Analytics) develops a "universal" nonlinear, time-varying dynamical machine learning solution that can faithfully model all the essential complexities of real-life business problems and shows how to apply it.

FEATURES:Develops a "universal," nonlinear, dynamical machine learning solution to model and apply the complexities of modern applications in IoTCovers topics such as machine learning, systems theory, linear algebra, digital signal processing, probability theory, state-space formulation, Bayesian estimation, Kalman filter, causality, and digital twins.