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| Descrizione fisica | 1 online resource (170 pages) |
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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. |

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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.