

Data Science And Big Data Analytics Discovering Analyzing Visualizing And Presenting Data

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Feature Engineering for Machine Learning and Data Analytics - Guozhu Dong 2018-03-14

Feature engineering plays a vital role in big data analytics. Machine learning and data mining algorithms cannot work without data. Little can be achieved if there are few features to represent the underlying data objects, and the quality of results of those algorithms largely depends on the quality of the available features. Feature Engineering for Machine Learning and Data Analytics provides a comprehensive introduction to feature

engineering, including feature generation, feature extraction, feature transformation, feature selection, and feature analysis and evaluation. The book presents key concepts, methods, examples, and applications, as well as chapters on feature engineering for major data types such as texts, images, sequences, time series, graphs, streaming data, software engineering data, Twitter data, and social media data. It also contains generic feature generation approaches, as well as methods for generating tried-and-tested, hand-

crafted, domain-specific features. The first chapter defines the concepts of features and feature engineering, offers an overview of the book, and provides pointers to topics not covered in this book. The next six chapters are devoted to feature engineering, including feature generation for specific data types. The subsequent four chapters cover generic approaches for feature engineering, namely feature selection, feature transformation based feature engineering, deep learning based feature engineering, and pattern based feature generation and engineering. The last three chapters discuss feature engineering for

social bot detection, software management, and Twitter-based applications respectively. This book can be used as a reference for data analysts, big data scientists, data preprocessing workers, project managers, project developers, prediction modelers, professors, researchers, graduate students, and upper level undergraduate students. It can also be used as the primary text for courses on feature engineering, or as a supplement for courses on machine learning, data mining, and big data analytics.

Artificial Intelligence and Big Data Analytics for Smart Healthcare - Miltiadis Lytras 2021-10-22

Artificial Intelligence and Big Data Analytics for Smart Healthcare serves as a key reference for practitioners and experts involved in healthcare as they strive to enhance the value added of healthcare and develop more sustainable healthcare systems. It brings together insights from emerging sophisticated information and communication technologies such as big data analytics, artificial intelligence, machine learning, data science, medical intelligence, and, by dwelling on their current and prospective applications, highlights managerial and policymaking challenges they may generate. The

book is split into five sections: big data infrastructure, framework and design for smart healthcare; signal processing techniques for smart healthcare applications; business analytics (descriptive, diagnostic, predictive and prescriptive) for smart healthcare; emerging tools and techniques for smart healthcare; and challenges (security, privacy, and policy) in big data for smart healthcare. The content is carefully developed to be understandable to different members of healthcare chain to leverage collaborations with researchers and industry. Presents a holistic discussion on the new

landscape of data driven medical technologies including Big Data, Analytics, Artificial Intelligence, Machine Learning, and Precision Medicine Discusses such technologies with case study driven approach with reference to real world application and systems, to make easier the understanding to the reader not familiar with them Encompasses an international collaboration perspective, providing understandable knowledge to professionals involved with healthcare to leverage productive partnerships with technology developers

Research Anthology on Big Data Analytics,

Architectures, and Applications - Information Resources Management Association 2022 Society is now completely driven by data with many industries relying on data to conduct business or basic functions within the organization. With the efficiencies that big data bring to all institutions, data is continuously being collected and analyzed. However, data sets may be too complex for traditional data-processing, and therefore, different strategies must evolve to solve the issue. The field of big data works as a valuable tool for many different industries. The

Research Anthology on Big Data Analytics,

Architectures, and Applications is a complete reference source on big data analytics that offers the latest, innovative architectures and frameworks and explores a variety of applications within various industries. Offering an international perspective, the applications discussed within this anthology feature global representation. Covering topics such as advertising curricula, driven supply chain, and smart cities, this research anthology is ideal for data scientists, data analysts, computer engineers, software engineers, technologists, government officials, managers, CEOs, professors, graduate students, researchers, and

academicians.

Data Science and Big Data Computing - Zaigham Mahmood 2016-07-05

This illuminating text/reference surveys the state of the art in data science, and provides practical guidance on big data analytics. Expert perspectives are provided by authoritative researchers and practitioners from around the world, discussing research developments and emerging trends, presenting case studies on helpful frameworks and innovative methodologies, and suggesting best practices for efficient and effective data analytics. Features: reviews a

framework for fast data applications, a technique for complex event processing, and agglomerative approaches for the partitioning of networks; introduces a unified approach to data modeling and management, and a distributed computing perspective on interfacing physical and cyber worlds; presents techniques for machine learning for big data, and identifying duplicate records in data repositories; examines enabling technologies and tools for data mining; proposes frameworks for data extraction, and adaptive decision making and social media analysis.

Demystifying Big Data, Machine Learning, and

Deep Learning for Healthcare Analytics - Pradeep
N 2021-06-25

Demystifying Big Data, Machine Learning, and Deep Learning for Healthcare Analytics presents the changing world of data utilization, especially in clinical healthcare. Various techniques, methodologies, and algorithms are presented in this book to organize data in a structured manner that will assist physicians in the care of patients and help biomedical engineers and computer scientists understand the impact of these techniques on healthcare analytics. The book is divided into two parts: Part 1 covers big data

aspects such as healthcare decision support systems and analytics-related topics. Part 2 focuses on the current frameworks and applications of deep learning and machine learning, and provides an outlook on future directions of research and development. The entire book takes a case study approach, providing a wealth of real-world case studies in the application chapters to act as a foundational reference for biomedical engineers, computer scientists, healthcare researchers, and clinicians. Provides a comprehensive reference for biomedical engineers, computer scientists,

advanced industry practitioners, researchers, and clinicians to understand and develop healthcare analytics using advanced tools and technologies Includes in-depth illustrations of advanced techniques via dataset samples, statistical tables, and graphs with algorithms and computational methods for developing new applications in healthcare informatics Unique case study approach provides readers with insights for practical clinical implementation

Big Data Analytics - 2015-08-04

While the term Big Data is open to varying interpretation, it is quite clear that the Volume,

Velocity, and Variety (3Vs) of data have impacted every aspect of computational science and its applications. The volume of data is increasing at a phenomenal rate and a majority of it is unstructured. With big data, the volume is so large that processing it using traditional database and software techniques is difficult, if not impossible. The drivers are the ubiquitous sensors, devices, social networks and the all-pervasive web. Scientists are increasingly looking to derive insights from the massive quantity of data to create new knowledge. In common usage, Big Data has come to refer simply to the use of

predictive analytics or other certain advanced methods to extract value from data, without any required magnitude thereon. Challenges include analysis, capture, curation, search, sharing, storage, transfer, visualization, and information privacy. While there are challenges, there are huge opportunities emerging in the fields of Machine Learning, Data Mining, Statistics, Human-Computer Interfaces and Distributed Systems to address ways to analyze and reason with this data. The edited volume focuses on the challenges and opportunities posed by "Big Data" in a variety of domains and how statistical

techniques and innovative algorithms can help glean insights and accelerate discovery. Big data has the potential to help companies improve operations and make faster, more intelligent decisions. Review of big data research challenges from diverse areas of scientific endeavor Rich perspective on a range of data science issues from leading researchers Insight into the mathematical and statistical theory underlying the computational methods used to address big data analytics problems in a variety of domains

The Enterprise Big Data Lake - Alex Gorelik

2019-02-21

The data lake is a daring new approach for harnessing the power of big data technology and providing convenient self-service capabilities. But is it right for your company? This book is based on discussions with practitioners and executives from more than a hundred organizations, ranging from data-driven companies such as Google, LinkedIn, and Facebook, to governments and traditional corporate enterprises. You'll learn what a data lake is, why enterprises need one, and how to build one successfully with the best practices in this book. Alex Gorelik, CTO and founder of Waterline Data, explains why old

systems and processes can no longer support data needs in the enterprise. Then, in a collection of essays about data lake implementation, you'll examine data lake initiatives, analytic projects, experiences, and best practices from data experts working in various industries. Get a succinct introduction to data warehousing, big data, and data science Learn various paths enterprises take to build a data lake Explore how to build a self-service model and best practices for providing analysts access to the data Use different methods for architecting your data lake Discover ways to implement a data lake from experts in different

industries

Big Data Analytics and Knowledge Discovery -
Sanjay Madria 2015-08-09

This book constitutes the refereed proceedings of the 17th International Conference on Data Warehousing and Knowledge Discovery, DaWaK 2015, held in Valencia, Spain, September 2015.

The 31 revised full papers presented were carefully reviewed and selected from 90 submissions. The papers are organized in topical sections similarity measure and clustering; data mining; social computing; heterogeneous networks and data; data warehouses; stream processing;

applications of big data analysis; and big data.

Data Science for Business - Foster Provost

2013-07-27

Written by renowned data science experts Foster Provost and Tom Fawcett, *Data Science for Business* introduces the fundamental principles of data science, and walks you through the "data-analytic thinking" necessary for extracting useful knowledge and business value from the data you collect. This guide also helps you understand the many data-mining techniques in use today. Based on an MBA course Provost has taught at New York University over the past ten years, *Data*

Science for Business provides examples of real-world business problems to illustrate these principles. You'll not only learn how to improve communication between business stakeholders and data scientists, but also how to participate intelligently in your company's data science projects. You'll also discover how to think data-analytically, and fully appreciate how data science methods can support business decision-making. Understand how data science fits in your organization—and how you can use it for competitive advantage. Treat data as a business asset that requires careful investment if you're to

gain real value Approach business problems data-analytically, using the data-mining process to gather good data in the most appropriate way Learn general concepts for actually extracting knowledge from data Apply data science principles when interviewing data science job candidates

Big Data Analytics and Intelligence - Poonam Tanwar 2020-09-30

Big Data Analytics and Intelligence is essential reading for researchers and experts working in the fields of health care, data science, analytics, the internet of things, and information retrieval.

The Essentials of Data Science: Knowledge Discovery Using R - Graham J. Williams

2017-07-28

The Essentials of Data Science: Knowledge Discovery Using R presents the concepts of data science through a hands-on approach using free and open source software. It systematically drives an accessible journey through data analysis and machine learning to discover and share knowledge from data. Building on over thirty years' experience in teaching and practising data science, the author encourages a programming-by-example approach to ensure students and

practitioners attune to the practise of data science while building their data skills. Proven frameworks are provided as reusable templates. Real world case studies then provide insight for the data scientist to swiftly adapt the templates to new tasks and datasets. The book begins by introducing data science. It then reviews R's capabilities for analysing data by writing computer programs. These programs are developed and explained step by step. From analysing and visualising data, the framework moves on to tried and tested machine learning techniques for predictive modelling and knowledge discovery.

Literate programming and a consistent style are a focus throughout the book.

Data Science and Big Data Analytics - EMC Services 2015

Data Science and Big Data Analytics is about harnessing the power of data for new insights. The book covers the breadth of activities and methods and tools that Data Scientists use. The content focuses on concepts, principles and practical applications that are applicable to any industry and technology environment, and the learning is supported and explained with examples that you can replicate using open-

source software. This book will help you: Become a contributor on a data science team Deploy a structured lifecycle approach to data analytics problems Apply appropriate analytic techniques and tools to analyzing big data Learn how to tell a compelling story with data to drive business action Prepare for EMC Proven Professional Data Science Certification Corresponding data sets are available at www.wiley.com/go/9781118876138 . Get started discovering, analyzing, visualizing, and presenting data in a meaningful way today!

Big Data Analytics for Healthcare - Pantea Keikhosrokiani 2022-05-19

Big Data Analytics and Medical Information Systems presents the valuable use of artificial intelligence and big data analytics in healthcare and medical sciences. It focuses on theories, methods and approaches in which data analytic techniques can be used to examine medical data to provide a meaningful pattern for classification, diagnosis, treatment, and prediction of diseases. The book discusses topics such as theories and concepts of the field, and how big medical data mining techniques and applications can be applied to classification, diagnosis, treatment, and prediction of diseases. In addition, it covers

social, behavioral, and medical fake news analytics to prevent medical misinformation and myths. It is a valuable resource for graduate students, researchers and members of biomedical field who are interested in learning more about analytic tools to support their work. Presents theories, methods and approaches in which data analytic techniques are used for medical data. Brings practical information on how to use big data for classification, diagnosis, treatment, and prediction of diseases. Discusses social, behavioral, and medical fake news analytics for medical information systems.

Data Science and Big Data Analytics - EMC

Education Services 2015-01-05

Data Science and Big Data Analytics is about harnessing the power of data for new insights. The book covers the breadth of activities and methods and tools that Data Scientists use. The content focuses on concepts, principles and practical applications that are applicable to any industry and technology environment, and the learning is supported and explained with examples that you can replicate using open-source software. This book will help you: Become a contributor on a data science team Deploy a

structured lifecycle approach to data analytics problems Apply appropriate analytic techniques and tools to analyzing big data Learn how to tell a compelling story with data to drive business action Prepare for EMC Proven Professional Data Science Certification Corresponding data sets are available from the book's page at Wiley which you can find on the Wiley site by searching for the ISBN 9781118876138. Get started discovering, analyzing, visualizing, and presenting data in a meaningful way today!

Federal Data Science - Feras A. Batarseh

2017-09-21

Federal Data Science serves as a guide for federal software engineers, government analysts, economists, researchers, data scientists, and engineering managers in deploying data analytics methods to governmental processes. Driven by open government (2009) and big data (2012) initiatives, federal agencies have a serious need to implement intelligent data management methods, share their data, and deploy advanced analytics to their processes. Using federal data for reactive decision making is not sufficient anymore, intelligent data systems allow for proactive activities that lead to benefits such as:

improved citizen services, higher accountability, reduced delivery inefficiencies, lower costs, enhanced national insights, and better policy making. No other government-dedicated work has been found in literature that addresses this broad topic. This book provides multiple use-cases, describes federal data science benefits, and fills the gap in this critical and timely area. Written and reviewed by academics, industry experts, and federal analysts, the problems and challenges of developing data systems for government agencies is presented by actual developers, designers, and users of those systems, providing

a unique and valuable real-world perspective. Offers a range of data science models, engineering tools, and federal use-cases Provides foundational observations into government data resources and requirements Introduces experiences and examples of data openness from the US and other countries A step-by-step guide for the conversion of government towards data-driven policy making Focuses on presenting data models that work within the constraints of the US government Presents the why, the what, and the how of injecting AI into federal culture and software systems

Python for Data Science - Daniel O'Reilly

2021-02-16

Here's the Perfect Solution if You Want to

Become the Master of Data Science and Learn

Python Step-by-Step Would you like to: Learn a super competitive skill? Become irreplaceable in the future job market? Upgrade yourself to the ultimate data whizz? If so, then keep reading!

Data science is one of the emerging technologies that is set to radically transform the job market.

With applications in almost every industry, data science experts will have no shortage of great job offers. But, the whole field may seem a little

intimidating if your background is not specific to data science. This book is here to guide you through the field of data science from the very beginning. You will learn the fundamental skills and tools to support your learning process. If you're a beginner, this is the book to help you easily understand the basics of data science. To understand data science, you also need a good understanding of how Python helps you design and implement these projects. This guidebook is going to explain how we can get all of this done. Here just a little preview of what you'll find inside this book: A thorough and simple explanation of

data science and the way it works Basics of data science and fundamental skills you need to get started Data science libraries you need to learn to become a data whizz A blueprint for the most used frameworks for Python data science How to process and understand the data and design your own projects AND SO MUCH MORE! Even if you're an absolute beginner with little programming experience, you will find this book easy to follow and implement. This guide is your first step towards a successful data science career, so don't hesitate! Scroll Up, Click the "Buy Now with 1-Click", and Get Your Copy!

Process Safety and Big Data - Sagit Valeev

2021-02-18

Process Safety and Big Data discusses the principles of process safety and advanced information technologies. It explains how these principles are applied to the process industry and provides examples of applications in process safety control and decision support systems. This book helps to address problems that researchers face in industry that are the result of increased process complexity and that have an impact on safety issues. It shows ways to tackle these safety issues by implementing modern information

technologies, such as big data analysis and artificial intelligence. It provides an integrated approach to modern information technologies used in control and management of process safety in industry. The book also considers indicators and criteria in effective safety decisions, and addresses the issue of how big data would provide support for improved, autonomous, data-driven decisions. Paves the way for the digital transformation of safety science and safety management Takes a system approach to advanced information technologies used in process safety Applies big data

technologies to process safety Includes multiple pertinent case studies

Data Science Foundations - Fionn Murtagh

2017-09-22

"Data Science Foundations is most welcome and, indeed, a piece of literature that the field is very much in need of...quite different from most data analytics texts which largely ignore foundational concepts and simply present a cookbook of methods...a very useful text and I would certainly use it in my teaching." - Mark Girolami, Warwick University Data Science encompasses the traditional disciplines of mathematics, statistics,

data analysis, machine learning, and pattern recognition. This book is designed to provide a new framework for Data Science, based on a solid foundation in mathematics and computational science. It is written in an accessible style, for readers who are engaged with the subject but not necessarily experts in all aspects. It includes a wide range of case studies from diverse fields, and seeks to inspire and motivate the reader with respect to data, associated information, and derived knowledge.

Big Data Analytics with Spark - Mohammed Guller 2015-12-29

Big Data Analytics with Spark is a step-by-step guide for learning Spark, which is an open-source fast and general-purpose cluster computing framework for large-scale data analysis. You will learn how to use Spark for different types of big data analytics projects, including batch, interactive, graph, and stream data analysis as well as machine learning. In addition, this book will help you become a much sought-after Spark expert. Spark is one of the hottest Big Data technologies. The amount of data generated today by devices, applications and users is exploding. Therefore, there is a critical need for

tools that can analyze large-scale data and unlock value from it. Spark is a powerful technology that meets that need. You can, for example, use Spark to perform low latency computations through the use of efficient caching and iterative algorithms; leverage the features of its shell for easy and interactive Data analysis; employ its fast batch processing and low latency features to process your real time data streams and so on. As a result, adoption of Spark is rapidly growing and is replacing Hadoop MapReduce as the technology of choice for big data analytics. This book provides an introduction

to Spark and related big-data technologies. It covers Spark core and its add-on libraries, including Spark SQL, Spark Streaming, GraphX, and MLlib. Big Data Analytics with Spark is therefore written for busy professionals who prefer learning a new technology from a consolidated source instead of spending countless hours on the Internet trying to pick bits and pieces from different sources. The book also provides a chapter on Scala, the hottest functional programming language, and the program that underlies Spark. You'll learn the basics of functional programming in Scala, so that

you can write Spark applications in it. What's more, Big Data Analytics with Spark provides an introduction to other big data technologies that are commonly used along with Spark, like Hive, Avro, Kafka and so on. So the book is self-sufficient; all the technologies that you need to know to use Spark are covered. The only thing that you are expected to know is programming in any language. There is a critical shortage of people with big data expertise, so companies are willing to pay top dollar for people with skills in areas like Spark and Scala. So reading this book and absorbing its principles will provide a

boost—possibly a big boost—to your career.

Big Data Application in Power Systems - Reza Arghandeh 2017-11-27

Big Data Application in Power Systems brings together experts from academia, industry and regulatory agencies who share their understanding and discuss the big data analytics applications for power systems diagnostics, operation and control. Recent developments in monitoring systems and sensor networks dramatically increase the variety, volume and velocity of measurement data in electricity transmission and distribution level. The book

focuses on rapidly modernizing monitoring systems, measurement data availability, big data handling and machine learning approaches to process high dimensional, heterogeneous and spatiotemporal data. The book chapters discuss challenges, opportunities, success stories and pathways for utilizing big data value in smart grids. Provides expert analysis of the latest developments by global authorities Contains detailed references for further reading and extended research Provides additional cross-disciplinary lessons learned from broad disciplines such as statistics, computer science and

bioinformatics Focuses on rapidly modernizing monitoring systems, measurement data availability, big data handling and machine learning approaches to process high dimensional, heterogeneous and spatiotemporal data

Cognitive Computing and Big Data Analytics -

Judith S. Hurwitz 2015-04-08

A comprehensive guide to learning technologies that unlock the value in big data Cognitive Computing provides detailed guidance toward building a new class of systems that learn from experience and derive insights to unlock the value of big data. This book helps technologists

understand cognitive computing's underlying technologies, from knowledge representation techniques and natural language processing algorithms to dynamic learning approaches based on accumulated evidence, rather than reprogramming. Detailed case examples from the financial, healthcare, and manufacturing walk readers step-by-step through the design and testing of cognitive systems, and expert perspectives from organizations such as Cleveland Clinic, Memorial Sloan-Kettering, as well as commercial vendors that are creating solutions. These organizations provide insight into

the real-world implementation of cognitive computing systems. The IBM Watson cognitive computing platform is described in a detailed chapter because of its significance in helping to define this emerging market. In addition, the book includes implementations of emerging projects from Qualcomm, Hitachi, Google and Amazon. Today's cognitive computing solutions build on established concepts from artificial intelligence, natural language processing, ontologies, and leverage advances in big data management and analytics. They foreshadow an intelligent infrastructure

that enables a new generation of customer and context-aware smart applications in all industries. Cognitive Computing is a comprehensive guide to the subject, providing both the theoretical and practical guidance technologists need. Discover how cognitive computing evolved from promise to reality. Learn the elements that make up a cognitive computing system. Understand the groundbreaking hardware and software technologies behind cognitive computing. Learn to evaluate your own application portfolio to find the best candidates for pilot projects. Leverage cognitive computing capabilities to transform

the organization. Cognitive systems are rightly being hailed as the new era of computing. Learn how these technologies enable emerging firms to compete with entrenched giants, and forward-thinking established firms to disrupt their industries. Professionals who currently work with big data and analytics will see how cognitive computing builds on their foundation, and creates new opportunities. Cognitive Computing provides complete guidance to this new level of human-machine interaction.

Big Data Analytics for Cyber-Physical Systems -
Guido Dartmann 2019-07-15

Big Data Analytics in Cyber-Physical Systems: Machine Learning for the Internet of Things examines sensor signal processing, IoT gateways, optimization and decision-making, intelligent mobility, and implementation of machine learning algorithms in embedded systems. This book focuses on the interaction between IoT technology and the mathematical tools used to evaluate the extracted data of those systems. Each chapter provides the reader with a broad list of data analytics and machine learning methods for multiple IoT applications. Additionally, this volume addresses the educational transfer

needed to incorporate these technologies into our society by examining new platforms for IoT in schools, new courses and concepts for universities and adult education on IoT and data science. . Bridges the gap between IoT, CPS, and mathematical modelling. Features numerous use cases that discuss how concepts are applied in different domains and applications. Provides "best practices", "winning stories" and "real-world examples" to complement innovation. Includes highlights of mathematical foundations of signal processing and machine learning in CPS and IoT.

Practical Big Data Analytics - Nataraj Dasgupta

2018-01-15

Get command of your organizational Big Data using the power of data science and analytics
Key Features A perfect companion to boost your Big Data storing, processing, analyzing skills to help you take informed business decisions Work with the best tools such as Apache Hadoop, R, Python, and Spark for NoSQL platforms to perform massive online analyses Get expert tips on statistical inference, machine learning, mathematical modeling, and data visualization for Big Data Book Description Big Data analytics relates to the strategies used by organizations to

collect, organize and analyze large amounts of data to uncover valuable business insights that otherwise cannot be analyzed through traditional systems. Crafting an enterprise-scale cost-efficient Big Data and machine learning solution to uncover insights and value from your organization's data is a challenge. Today, with hundreds of new Big Data systems, machine learning packages and BI Tools, selecting the right combination of technologies is an even greater challenge. This book will help you do that. With the help of this guide, you will be able to bridge the gap between the theoretical world of

technology with the practical ground reality of building corporate Big Data and data science platforms. You will get hands-on exposure to Hadoop and Spark, build machine learning dashboards using R and R Shiny, create web-based apps using NoSQL databases such as MongoDB and even learn how to write R code for neural networks. By the end of the book, you will have a very clear and concrete understanding of what Big Data analytics means, how it drives revenues for organizations, and how you can develop your own Big Data analytics solution using different tools and methods articulated in

this book. What you will learn - Get a 360-degree view into the world of Big Data, data science and machine learning - Broad range of technical and business Big Data analytics topics that caters to the interests of the technical experts as well as corporate IT executives - Get hands-on experience with industry-standard Big Data and machine learning tools such as Hadoop, Spark, MongoDB, KDB+ and R - Create production-grade machine learning BI Dashboards using R and R Shiny with step-by-step instructions - Learn how to combine open-source Big Data, machine learning and BI Tools to create low-cost business

analytics applications - Understand corporate strategies for successful Big Data and data science projects - Go beyond general-purpose analytics to develop cutting-edge Big Data applications using emerging technologies Who this book is for The book is intended for existing and aspiring Big Data professionals who wish to become the go-to person in their organization when it comes to Big Data architecture, analytics, and governance. While no prior knowledge of Big Data or related technologies is assumed, it will be helpful to have some programming experience.

Big Data MBA - Bill Schmarzo 2015-12-11

Integrate big data into business to drive competitive advantage and sustainable success Big Data MBA brings insight and expertise to leveraging big data in business so you can harness the power of analytics and gain a true business advantage. Based on a practical framework with supporting methodology and hands-on exercises, this book helps identify where and how big data can help you transform your business. You'll learn how to exploit new sources of customer, product, and operational data, coupled with advanced analytics and data science, to optimize key processes, uncover

monetization opportunities, and create new sources of competitive differentiation. The discussion includes guidelines for operationalizing analytics, optimal organizational structure, and using analytic insights throughout your organization's user experience to customers and front-end employees alike. You'll learn to “think like a data scientist” as you build upon the decisions your business is trying to make, the hypotheses you need to test, and the predictions you need to produce. Business stakeholders no longer need to relinquish control of data and analytics to IT. In fact, they must champion the

organization's data collection and analysis efforts.

This book is a primer on the business approach to analytics, providing the practical understanding you need to convert data into opportunity.

Understand where and how to leverage big data

Integrate analytics into everyday operations

Structure your organization to drive analytic

insights Optimize processes, uncover

opportunities, and stand out from the rest Help

business stakeholders to “think like a data

scientist” Understand appropriate business

application of different analytic techniques If you

want data to transform your business, you need

to know how to put it to use. Big Data MBA shows you how to implement big data and analytics to make better decisions.

Data Science and Big Data Analytics - EMC Education Services 2014-12-19

Data Science and Big Data Analytics is about harnessing the power of data for new insights. The book covers the breadth of activities and methods and tools that Data Scientists use. The content focuses on concepts, principles and practical applications that are applicable to any industry and technology environment, and the learning is supported and explained with

examples that you can replicate using open-source software. This book will help you: Become a contributor on a data science team Deploy a structured lifecycle approach to data analytics problems Apply appropriate analytic techniques and tools to analyzing big data Learn how to tell a compelling story with data to drive business action Prepare for EMC Proven Professional Data Science Certification Corresponding data sets are available at www.wiley.com/go/9781118876138. Get started discovering, analyzing, visualizing, and presenting data in a meaningful way today!

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Education Services 2015-01-27

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problems Apply appropriate analytic techniques and tools to analyzing big data Learn how to tell a compelling story with data to drive business action Prepare for EMC Proven Professional Data Science Certification Get started discovering, analyzing, visualizing, and presenting data in a meaningful way today!

[Getting Started with Data Science](#) - Murtaza Haider 2015-12-14

Master Data Analytics Hands-On by Solving Fascinating Problems You'll Actually Enjoy! Harvard Business Review recently called data science "The Sexiest Job of the 21st Century."

It's not just sexy: For millions of managers, analysts, and students who need to solve real business problems, it's indispensable. Unfortunately, there's been nothing easy about learning data science—until now. *Getting Started with Data Science* takes its inspiration from worldwide best-sellers like *Freakonomics* and Malcolm Gladwell's *Outliers*: It teaches through a powerful narrative packed with unforgettable stories. Murtaza Haider offers informative, jargon-free coverage of basic theory and technique, backed with plenty of vivid examples and hands-on practice opportunities. Everything's software

and platform agnostic, so you can learn data science whether you work with R, Stata, SPSS, or SAS. Best of all, Haider teaches a crucial skillset most data science books ignore: how to tell powerful stories using graphics and tables. Every chapter is built around real research challenges, so you'll always know why you're doing what you're doing. You'll master data science by answering fascinating questions, such as:

- Are religious individuals more or less likely to have extramarital affairs?
- Do attractive professors get better teaching evaluations?
- Does the higher price of cigarettes deter

smoking? • What determines housing prices more: lot size or the number of bedrooms? • How do teenagers and older people differ in the way they use social media? • Who is more likely to use online dating services? • Why do some purchase iPhones and others Blackberry devices? • Does the presence of children influence a family's spending on alcohol? For each problem, you'll walk through defining your question and the answers you'll need; exploring how others have approached similar challenges; selecting your data and methods; generating your statistics; organizing your report; and telling your story.

Throughout, the focus is squarely on what matters most: transforming data into insights that are clear, accurate, and can be acted upon.

Analytics in a Big Data World - Bart Baesens
2014-04-15

The guide to targeting and leveraging business opportunities using big data & analytics By leveraging big data & analytics, businesses create the potential to better understand, manage, and strategically exploiting the complex dynamics of customer behavior. Analytics in a Big Data World reveals how to tap into the powerful tool of data analytics to create a strategic advantage and

identify new business opportunities. Designed to be an accessible resource, this essential book does not include exhaustive coverage of all analytical techniques, instead focusing on analytics techniques that really provide added value in business environments. The book draws on author Bart Baesens' expertise on the topics of big data, analytics and its applications in e.g. credit risk, marketing, and fraud to provide a clear roadmap for organizations that want to use data analytics to their advantage, but need a good starting point. Baesens has conducted extensive research on big data, analytics, customer

relationship management, web analytics, fraud detection, and credit risk management, and uses this experience to bring clarity to a complex topic. Includes numerous case studies on risk management, fraud detection, customer relationship management, and web analytics. Offers the results of research and the author's personal experience in banking, retail, and government. Contains an overview of the visionary ideas and current developments on the strategic use of analytics for business. Covers the topic of data analytics in easy-to-understand terms without an undue emphasis on mathematics and

the minutiae of statistical analysis For organizations looking to enhance their capabilities via data analytics, this resource is the go-to reference for leveraging data to enhance business capabilities.

Applications of Big Data Analytics - Mohammed M. Alani 2018-07-23

This timely text/reference reviews the state of the art of big data analytics, with a particular focus on practical applications. An authoritative selection of leading international researchers present detailed analyses of existing trends for storing and analyzing big data, together with valuable insights

into the challenges inherent in current approaches and systems. This is further supported by real-world examples drawn from a broad range of application areas, including healthcare, education, and disaster management. The text also covers, typically from an application-oriented perspective, advances in data science in such areas as big data collection, searching, analysis, and knowledge discovery. Topics and features: Discusses a model for data traffic aggregation in 5G cellular networks, and a novel scheme for resource allocation in 5G networks with network slicing Explores methods that use big data in the

assessment of flood risks, and apply neural networks techniques to monitor the safety of nuclear power plants Describes a system which leverages big data analytics and the Internet of Things in the application of drones to aid victims in disaster scenarios Proposes a novel deep learning-based health data analytics application for sleep apnea detection, and a novel pathway for diagnostic models of headache disorders Reviews techniques for educational data mining and learning analytics, and introduces a scalable MapReduce graph partitioning approach for high degree vertices Presents a multivariate and

dynamic data representation model for the visualization of healthcare data, and big data analytics methods for software reliability assessment This practically-focused volume is an invaluable resource for all researchers, academics, data scientists and business professionals involved in the planning, designing, and implementation of big data analytics projects. Dr. Mohammed M. Alani is an Associate Professor in Computer Engineering and currently is the Provost at Al Khawarizmi International College, Abu Dhabi, UAE. Dr. Hissam Tawfik is a Professor of Computer Science in the School of

Computing, Creative Technologies & Engineering at Leeds Beckett University, UK. Dr. Mohammed Saeed is a Professor in Computing and currently is the Vice President for Academic Affairs and Research at the University of Modern Sciences, Dubai, UAE. Dr. Obinna Anya is a Research Staff Member at IBM Research – Almaden, San Jose, CA, USA.

Big Data Analytics: Systems, Algorithms, Applications - C.S.R. Prabhu 2019-10-14

This book provides a comprehensive survey of techniques, technologies and applications of Big Data and its analysis. The Big Data phenomenon

is increasingly impacting all sectors of business and industry, producing an emerging new information ecosystem. On the applications front, the book offers detailed descriptions of various application areas for Big Data Analytics in the important domains of Social Semantic Web Mining, Banking and Financial Services, Capital Markets, Insurance, Advertisement, Recommendation Systems, Bio-Informatics, the IoT and Fog Computing, before delving into issues of security and privacy. With regard to machine learning techniques, the book presents all the standard algorithms for learning – including

supervised, semi-supervised and unsupervised techniques such as clustering and reinforcement learning techniques to perform collective Deep Learning. Multi-layered and nonlinear learning for Big Data are also covered. In turn, the book highlights real-life case studies on successful implementations of Big Data Analytics at large IT companies such as Google, Facebook, LinkedIn and Microsoft. Multi-sectorial case studies on domain-based companies such as Deutsche Bank, the power provider Opower, Delta Airlines and a Chinese City Transportation application represent a valuable addition. Given its

comprehensive coverage of Big Data Analytics, the book offers a unique resource for undergraduate and graduate students, researchers, educators and IT professionals alike.

Think Like a Data Scientist - Brian Godsey

2017-03-09

Summary Think Like a Data Scientist presents a step-by-step approach to data science, combining analytic, programming, and business perspectives into easy-to-digest techniques and thought processes for solving real world data-centric problems. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats

from Manning Publications. About the Technology Data collected from customers, scientific measurements, IoT sensors, and so on is valuable only if you understand it. Data scientists revel in the interesting and rewarding challenge of observing, exploring, analyzing, and interpreting this data. Getting started with data science means more than mastering analytic tools and techniques, however; the real magic happens when you begin to think like a data scientist. This book will get you there. About the Book Think Like a Data Scientist teaches you a step-by-step approach to solving real-world data-centric

problems. By breaking down carefully crafted examples, you'll learn to combine analytic, programming, and business perspectives into a repeatable process for extracting real knowledge from data. As you read, you'll discover (or remember) valuable statistical techniques and explore powerful data science software. More importantly, you'll put this knowledge together using a structured process for data science. When you've finished, you'll have a strong foundation for a lifetime of data science learning and practice. What's Inside The data science process, step-by-step How to anticipate problems

Dealing with uncertainty Best practices in software and scientific thinking About the Reader Readers need beginner programming skills and knowledge of basic statistics. About the Author Brian Godsey has worked in software, academia, finance, and defense and has launched several data-centric start-ups. Table of Contents PART 1 - PREPARING AND GATHERING DATA AND KNOWLEDGE Philosophies of data science Setting goals by asking good questions Data all around us: the virtual wilderness Data wrangling: from capture to domestication Data assessment: poking and prodding PART 2 - BUILDING A

PRODUCT WITH SOFTWARE AND STATISTICS

Developing a plan Statistics and modeling: concepts and foundations Software: statistics in action Supplementary software: bigger, faster, more efficient Plan execution: putting it all together PART 3 - FINISHING OFF THE

PRODUCT AND WRAPPING UP Delivering a product After product delivery: problems and revisions Wrapping up: putting the project away

[Introducing Data Science](#) - Davy Cielen

2016-05-02

Summary Introducing Data Science teaches you how to accomplish the fundamental tasks that

occupy data scientists. Using the Python language and common Python libraries, you'll experience firsthand the challenges of dealing with data at scale and gain a solid foundation in data science. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology

Many companies need developers with data science skills to work on projects ranging from social media marketing to machine learning. Discovering what you need to learn to begin a career as a data scientist can seem bewildering. This book is designed to help you get started.

About the Book *Introducing Data Science* explains vital data science concepts and teaches you how to accomplish the fundamental tasks that occupy data scientists. You'll explore data visualization, graph databases, the use of NoSQL, and the data science process. You'll use the Python language and common Python libraries as you experience firsthand the challenges of dealing with data at scale. Discover how Python allows you to gain insights from data sets so big that they need to be stored on multiple machines, or from data moving so quickly that no single

machine can handle it. This book gives you hands-on experience with the most popular Python data science libraries, Scikit-learn and StatsModels. After reading this book, you'll have the solid foundation you need to start a career in data science. What's Inside Handling large data Introduction to machine learning Using Python to work with data Writing data science algorithms About the Reader This book assumes you're comfortable reading code in Python or a similar language, such as C, Ruby, or JavaScript. No prior experience with data science is required. About the Authors Davy Cielen, Arno D. B.

Meysman, and Mohamed Ali are the founders and managing partners of Optimately and Maiton, where they focus on developing data science projects and solutions in various sectors. Table of Contents Data science in a big data world The data science process Machine learning Handling large data on a single computer First steps in big data Join the NoSQL movement The rise of graph databases Text mining and text analytics Data visualization to the end user **Big Data Fundamentals** - Thomas Erl 2015-12-29 "This text should be required reading for everyone in contemporary business." --Peter

Woodhull, CEO, Modus21 “The one book that clearly describes and links Big Data concepts to business utility.” --Dr. Christopher Starr, PhD
“Simply, this is the best Big Data book on the market!” --Sam Rostam, Cascadian IT Group
“...one of the most contemporary approaches I’ve seen to Big Data fundamentals...” --Joshua M. Davis, PhD
The Definitive Plain-English Guide to Big Data for Business and Technology
Professionals Big Data Fundamentals provides a pragmatic, no-nonsense introduction to Big Data.
Best-selling IT author Thomas Erl and his team clearly explain key Big Data concepts, theory and

terminology, as well as fundamental technologies and techniques. All coverage is supported with case study examples and numerous simple diagrams. The authors begin by explaining how Big Data can propel an organization forward by solving a spectrum of previously intractable business problems. Next, they demystify key analysis techniques and technologies and show how a Big Data solution environment can be built and integrated to offer competitive advantages.
Discovering Big Data’s fundamental concepts and what makes it different from previous forms of data analysis and data science
Understanding the

business motivations and drivers behind Big Data adoption, from operational improvements through innovation Planning strategic, business-driven Big Data initiatives Addressing considerations such as data management, governance, and security Recognizing the 5 “V” characteristics of datasets in Big Data environments: volume, velocity, variety, veracity, and value Clarifying Big Data’s relationships with OLTP, OLAP, ETL, data warehouses, and data marts Working with Big Data in structured, unstructured, semi-structured, and metadata formats Increasing value by integrating Big Data resources with corporate

performance monitoring Understanding how Big Data leverages distributed and parallel processing Using NoSQL and other technologies to meet Big Data’s distinct data processing requirements Leveraging statistical approaches of quantitative and qualitative analysis Applying computational analysis methods, including machine learning *Big Data at Work* - Thomas Davenport 2014-02-04 Go ahead, be skeptical about big data. The author was—at first. When the term “big data” first came on the scene, bestselling author Tom Davenport (Competing on Analytics, Analytics at

Work) thought it was just another example of technology hype. But his research in the years that followed changed his mind. Now, in clear, conversational language, Davenport explains what big data means—and why everyone in business needs to know about it. Big Data at Work covers all the bases: what big data means from a technical, consumer, and management perspective; what its opportunities and costs are; where it can have real business impact; and which aspects of this hot topic have been oversold. This book will help you understand:

- Why big data is important to you and your

- organization
- What technology you need to manage it
- How big data could change your job, your company, and your industry
- How to hire, rent, or develop the kinds of people who make big data work
- The key success factors in implementing any big data project
- How big data is leading to a new approach to managing analytics

With dozens of company examples, including UPS, GE, Amazon, United Healthcare, Citigroup, and many others, this book will help you seize all opportunities—from improving decisions, products, and services to strengthening customer relationships. It will show you how to

put big data to work in your own organization so that you too can harness the power of this ever-evolving new resource.

Data Science and Big Data Analytics - Durgesh Kumar Mishra 2018-08-01

This book presents conjectural advances in big data analysis, machine learning and computational intelligence, as well as their potential applications in scientific computing. It discusses major issues pertaining to big data analysis using computational intelligence techniques, and the conjectural elements are supported by simulation and modelling

applications to help address real-world problems. An extensive bibliography is provided at the end of each chapter. Further, the main content is supplemented by a wealth of figures, graphs, and tables, offering a valuable guide for researchers in the field of big data analytics and computational intelligence.

Data Science - Herbert Jones 2018-11

Did you know that the value of data usage has increased job opportunities, but that there are few specialists? These days, everyone is aware of the role that data can play, whether it is an election, business or education. But how can you start

working in a wide interdisciplinary field that is occupied with so much hype? This book, *Data Science: What the Best Data Scientists Know About Data Analytics, Data Mining, Statistics, Machine Learning, and Big Data - That You Don't*, presents you with a step-by-step approach to Data Science as well as secrets only known by the best Data Scientists. It combines analytical engineering, Machine Learning, Big Data, Data Mining, and Statistics in an easy to read and digest method. Data gathered from scientific measurements, customers, IoT sensors, and so on is very important only when one can draw

meaning from it. Data Scientists are professionals that help disclose interesting and rewarding challenges of exploring, observing, analyzing, and interpreting data. To do that, they apply special techniques that help them discover the meaning of data. Becoming the best Data Scientist is more than just mastering analytic tools and techniques. The real deal lies in the way you apply your creative ability like expert Data Scientists. This book will help you discover that and get you there. The goal with *Data Science: What the Best Data Scientists Know About Data Analytics, Data Mining, Statistics, Machine Learning, and Big*

Data - That You Don't is to help you expand your skills from being a basic Data Scientist to becoming an expert Data Scientist ready to solve real-world data centric issues. At the end of this book, you will learn how to combine Machine Learning, Data Mining, analytics, and programming, and extract real knowledge from data. As you read, you will discover important statistical techniques and algorithms that are helpful in learning Data Science. When you have finished, you will have a strong foundation to help you explore many other fields related to Data Science. This book will discuss the following

topics: What Data Science is What it takes to become an expert in Data Science Best Data Mining techniques to apply in data Data visualization Logistic regression Data engineering Machine Learning Big Data Analytics And much more! Don't waste any time. Grab your copy today and learn quick tips from the best Data scientists!

Data Science and Predictive Analytics - Ivo D. Dinov 2018-08-27

Over the past decade, Big Data have become ubiquitous in all economic sectors, scientific disciplines, and human activities. They have led

to striking technological advances, affecting all human experiences. Our ability to manage, understand, interrogate, and interpret such extremely large, multisource, heterogeneous, incomplete, multiscale, and incongruent data has not kept pace with the rapid increase of the volume, complexity and proliferation of the deluge of digital information. There are three reasons for this shortfall. First, the volume of data is increasing much faster than the corresponding rise of our computational processing power (Kryder's law > Moore's law). Second, traditional discipline-bounds inhibit expeditious progress.

Third, our education and training activities have fallen behind the accelerated trend of scientific, information, and communication advances. There are very few rigorous instructional resources, interactive learning materials, and dynamic training environments that support active data science learning. The textbook balances the mathematical foundations with dexterous demonstrations and examples of data, tools, modules and workflows that serve as pillars for the urgently needed bridge to close that supply and demand predictive analytic skills gap. Exposing the enormous opportunities presented

by the tsunami of Big data, this textbook aims to identify specific knowledge gaps, educational barriers, and workforce readiness deficiencies. Specifically, it focuses on the development of a transdisciplinary curriculum integrating modern computational methods, advanced data science techniques, innovative biomedical applications, and impactful health analytics. The content of this graduate-level textbook fills a substantial gap in integrating modern engineering concepts, computational algorithms, mathematical optimization, statistical computing and biomedical inference. Big data analytic techniques and

predictive scientific methods demand broad transdisciplinary knowledge, appeal to an extremely wide spectrum of readers/learners, and provide incredible opportunities for engagement throughout the academy, industry, regulatory and funding agencies. The two examples below demonstrate the powerful need for scientific knowledge, computational abilities, interdisciplinary expertise, and modern technologies necessary to achieve desired outcomes (improving human health and optimizing future return on investment). This can only be achieved by appropriately trained teams

of researchers who can develop robust decision support systems using modern techniques and effective end-to-end protocols, like the ones described in this textbook. • A geriatric neurologist is examining a patient complaining of gait imbalance and posture instability. To determine if the patient may suffer from Parkinson's disease, the physician acquires clinical, cognitive, phenotypic, imaging, and genetics data (Big Data). Most clinics and healthcare centers are not equipped with skilled data analytic teams that can wrangle, harmonize and interpret such complex datasets. A learner

that completes a course of study using this textbook will have the competency and ability to manage the data, generate a protocol for deriving biomarkers, and provide an actionable decision support system. The results of this protocol will help the physician understand the entire patient dataset and assist in making a holistic evidence-based, data-driven, clinical diagnosis. • To improve the return on investment for their shareholders, a healthcare manufacturer needs to forecast the demand for their product subject to environmental, demographic, economic, and bio-social sentiment data (Big Data). The

organization's data-analytics team is tasked with developing a protocol that identifies, aggregates, harmonizes, models and analyzes these heterogeneous data elements to generate a trend forecast. This system needs to provide an automated, adaptive, scalable, and reliable prediction of the optimal investment, e.g., R&D allocation, that maximizes the company's bottom line. A reader that complete a course of study using this textbook will be able to ingest the observed structured and unstructured data, mathematically represent the data as a computable object, apply appropriate model-

based and model-free prediction techniques. The results of these techniques may be used to forecast the expected relation between the company's investment, product supply, general demand of healthcare (providers and patients), and estimate the return on initial investments.

Big Data - Balamurugan Balusamy 2021-03-15
Learn Big Data from the ground up with this complete and up-to-date resource from leaders in the field *Big Data: Concepts, Technology, and Architecture* delivers a comprehensive treatment of Big Data tools, terminology, and technology perfectly suited to a wide range of business

professionals, academic researchers, and students. Beginning with a fulsome overview of what we mean when we say, “Big Data,” the book moves on to discuss every stage of the lifecycle of Big Data. You’ll learn about the creation of structured, unstructured, and semi-structured data, data storage solutions, traditional database solutions like SQL, data processing, data analytics, machine learning, and data mining. You’ll also discover how specific technologies like Apache Hadoop, SQOOP, and Flume work. Big Data also covers the central topic of big data visualization with Tableau, and

you’ll learn how to create scatter plots, histograms, bar, line, and pie charts with that software. Accessibly organized, Big Data includes illuminating case studies throughout the material, showing you how the included concepts have been applied in real-world settings. Some of those concepts include: The common challenges facing big data technology and technologists, like data heterogeneity and incompleteness, data volume and velocity, storage limitations, and privacy concerns Relational and non-relational databases, like RDBMS, NoSQL, and NewSQL databases Virtualizing Big Data through

encapsulation, partitioning, and isolating, as well as big data server virtualization Apache software, including Hadoop, Cassandra, Avro, Pig, Mahout, Oozie, and Hive The Big Data analytics lifecycle, including business case evaluation, data preparation, extraction, transformation, analysis, and visualization Perfect for data scientists, data engineers, and database managers, Big Data also belongs on the bookshelves of business intelligence analysts who are required to make decisions based on large volumes of information. Executives and managers who lead teams responsible for keeping or understanding large

datasets will also benefit from this book.

Data Science, Analytics and Machine Learning with R - Luiz Paulo Favero 2023-01-27

Data Science, Analytics and Machine Learning with R explains the principles of data mining and machine learning techniques and accentuates the importance of applied and multivariate modeling. The book emphasizes the fundamentals of each technique, with step-by-step codes and real-world examples with data from areas such as medicine and health, biology, engineering, technology and related sciences. Examples use the most recent R language syntax, with recognized robust,

widespread and current packages. Code scripts are exhaustively commented, making it clear to readers what happens in each command. For data collection, readers are instructed how to build their own robots from the very beginning. In addition, an entire chapter focuses on the concept of spatial analysis, allowing readers to build their own maps through geo-referenced data (such as in epidemiologic research) and some basic statistical techniques. Other chapters cover ensemble and uplift modeling and GLMM (Generalized Linear Mixed Models) estimations, both linear and nonlinear. Presents a

comprehensive and practical overview of machine learning, data mining and AI techniques for a broad multidisciplinary audience Serves readers who are interested in statistics, analytics and modeling, and those who wish to deepen their knowledge in programming through the use of R Teaches readers how to apply machine learning techniques to a wide range of data and subject areas Presents data in a graphically appealing way, promoting greater information transparency and interactive learning

Data Science and Analytics with Python - Jesus Rogel-Salazar 2018-02-05

Data Science and Analytics with Python is designed for practitioners in data science and data analytics in both academic and business environments. The aim is to present the reader with the main concepts used in data science using tools developed in Python, such as SciKit-learn, Pandas, Numpy, and others. The use of Python is of particular interest, given its recent popularity in the data science community. The book can be used by seasoned programmers and newcomers alike. The book is organized in a way that individual chapters are sufficiently independent from each other so that the reader is

comfortable using the contents as a reference. The book discusses what data science and analytics are, from the point of view of the process and results obtained. Important features of Python are also covered, including a Python primer. The basic elements of machine learning, pattern recognition, and artificial intelligence that underpin the algorithms and implementations used in the rest of the book also appear in the first part of the book. Regression analysis using Python, clustering techniques, and classification algorithms are covered in the second part of the book. Hierarchical clustering, decision trees, and

ensemble techniques are also explored, along with dimensionality reduction techniques and recommendation systems. The support vector machine algorithm and the Kernel trick are discussed in the last part of the book. About the Author Dr. Jesús Rogel-Salazar is a Lead Data scientist with experience in the field working for companies such as AKQA, IBM Data Science Studio, Dow Jones and others. He is a visiting researcher at the Department of Physics at Imperial College London, UK and a member of the School of Physics, Astronomy and

Mathematics at the University of Hertfordshire, UK, He obtained his doctorate in physics at Imperial College London for work on quantum atom optics and ultra-cold matter. He has held a position as senior lecturer in mathematics as well as a consultant in the financial industry since 2006. He is the author of the book Essential Matlab and Octave, also published by CRC Press. His interests include mathematical modelling, data science, and optimization in a wide range of applications including optics, quantum mechanics, data journalism, and finance.