

Marketing Data Science Modeling Techniques In Predictive Analytics With R And Python Ft Press Analytics

This book is a complete introduction to the power of R for marketing research practitioners. The text describes statistical models from a conceptual point of view with a minimal amount of mathematics, presuming only an introductory knowledge of statistics. Hands-on chapters accelerate the learning curve by asking readers to interact with R from the beginning. Core topics include the R language, basic statistics, linear modeling, and data visualization, which is presented throughout as an integral part of analysis. Later chapters cover more advanced topics yet are intended to be approachable for all analysts. These sections examine logistic regression, customer segmentation, hierarchical linear modeling, market basket analysis, structural equation modeling, and conjoint analysis in R. The text uniquely presents Bayesian models with a minimally complex approach, demonstrating and explaining Bayesian methods alongside traditional analyses for analysis of variance, linear models, and metric and choice-based conjoint analysis. With its emphasis on data visualization, model assessment, and development of statistical intuition, this book provides guidance for any analyst looking to develop or improve skills in R for marketing applications.

Advanced Customer Analytics provides a clear guide to the specific analytical challenges faced by the retail sector. The book covers the nature and scale of data obtained in transactions, relative proximity to the consumer and the need to monitor customer behaviour across multiple channels. The book advocates a category management approach, taking into account the need to understand the consumer mindset through elasticity modelling and discount strategies, as well as targeted marketing and loyalty design. A practical, no-nonsense approach to complex scenarios is taken throughout, breaking down tasks into easily digestible steps. The use of a fictional retail analyst 'Scott' helps to provide accessible examples of practice. Advanced Customer Analytics does not skirt around the complexities of this subject but offers conceptual support to steer retail marketers towards making the right choices for analysing their data.

Innovation based in data analytics is a contemporary approach to developing empirically supported advances that encourage entrepreneurial activity inspired by novel marketing inferences. Data Analytics in Marketing, Entrepreneurship, and Innovation covers techniques, processes, models, tools, and practices for creating business opportunities through data analytics. It features case studies that provide realistic examples of applications. This multifaceted examination of data analytics looks at: Business analytics Applying predictive analytics Using discrete choice analysis for decision-making Marketing and customer analytics Developing new products Technopreneurship Disruptive versus incremental innovation The book gives researchers and practitioners insight into how data analytics is used in the areas of innovation, entrepreneurship, and marketing. Innovation analytics helps identify opportunities to develop new products and services, and improve existing methods of product manufacturing and service delivery. Entrepreneurial analytics facilitates the transformation of innovative ideas into strategy and helps entrepreneurs make critical decisions based on data-driven techniques. Marketing analytics is used in collecting, managing, assessing, and analyzing marketing data to predict trends, investigate customer preferences, and launch campaigns.

Data science libraries, frameworks, modules, and toolkits are great for doing data science, but they're also a good way to dive into the discipline without actually understanding data science. In this book, you'll learn how many of the most fundamental data science tools and algorithms work by implementing them from scratch. If you have an aptitude for mathematics and some programming skills, author Joel Grus will help you get comfortable with the math and statistics at the core of data science, and with hacking skills you need to get started as a data scientist.

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Today's messy glut of data holds answers to questions no one's even thought to ask. This book provides you with the know-how to dig those answers out. Get a crash course in Python Learn the basics of linear algebra, statistics, and probability—and understand how and when they're used in data science Collect, explore, clean, munge, and manipulate data Dive into the fundamentals of machine learning Implement models such as k-nearest Neighbors, Naive Bayes, linear and logistic regression, decision trees, neural networks, and clustering Explore recommender systems, natural language processing, network analysis, MapReduce, and databases

This book provides an introduction to the mathematical and algorithmic foundations of data science, including machine learning, high-dimensional geometry, and analysis of large networks. Topics include the counterintuitive nature of data in high dimensions, important linear algebraic techniques such as singular value decomposition, the theory of random walks and Markov chains, the fundamentals of and important algorithms for machine learning, algorithms and analysis for clustering, probabilistic models for large networks, representation learning including topic modelling and non-negative matrix factorization, wavelets and compressed sensing. Important probabilistic techniques are developed including the law of large numbers, tail inequalities, analysis of random projections, generalization guarantees in machine learning, and moment methods for analysis of phase transitions in large random graphs. Additionally, important structural and complexity measures are discussed such as matrix norms and VC-dimension. This book is suitable for both undergraduate and graduate courses in the design and analysis of algorithms for data.

Data Science & Business Analytics explores the application of big data and business analytics by academics, researchers, industrial experts, policy makers and practitioners, helping the reader to understand how big data can be efficiently utilized in better managerial applications. This invaluable addition to any data scientist's library shows you how to apply the R programming language and useful statistical techniques to everyday business situations as well as how to effectively present results to audiences of all levels. To answer the ever-increasing demand for machine learning and analysis, this new edition boasts additional R tools, modeling techniques, and more. Practical Data Science with R, Second Edition takes a practice-oriented approach to explaining basic principles in the ever-expanding field of data science. You'll jump right to real-world use cases as you apply the R programming language and statistical analysis techniques to carefully explained examples based in marketing, business intelligence, and decision support. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

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Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. Use machine learning to understand your customers, frame decisions, and drive value The business analytics world has changed, and Data Scientists are taking over. Business Data Science takes you through the steps of using machine learning to implement best-in-class business data science. Whether you are a business leader with a desire to go deep on data, or an engineer who wants to learn how to apply Machine Learning to business problems, you'll find the information, insight, and tools you need to flourish in today's data-driven economy. You'll learn how to: •Use the key building blocks of Machine Learning: sparse regularization, out-of-sample validation, and latent factor and topic modeling•Understand how use ML tools in real world business

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problems, where causation matters more than correlation•Solve data science programs by scripting in the R programming language Today's business landscape is driven by data and constantly shifting. Companies live and die on their ability to make and implement the right decisions quickly and effectively. Business Data Science is about doing data science right. It's about the exciting things being done around Big Data to run a flourishing business. It's about the precepts, principals, and best practices that you need know for best-in-class business data science.

Learn the basics of Data Science through an easy to understand conceptual framework and immediately practice using RapidMiner platform. Whether you are brand new to data science or working on your tenth project, this book will show you how to analyze data, uncover hidden patterns and relationships to aid important decisions and predictions. Data Science has become an essential tool to extract value from data for any organization that collects, stores and processes data as part of its operations. This book is ideal for business users, data analysts, business analysts, engineers, and analytics professionals and for anyone who works with data. You'll be able to: Gain the necessary knowledge of different data science techniques to extract value from data. Master the concepts and inner workings of 30 commonly used powerful data science algorithms.

Implement step-by-step data science process using using RapidMiner, an open source GUI based data science platform Data Science techniques covered: Exploratory data analysis, Visualization, Decision trees, Rule induction, k-nearest neighbors, Naïve Bayesian classifiers, Artificial neural networks, Deep learning, Support vector machines, Ensemble models, Random forests, Regression, Recommendation engines, Association analysis, K-Means and Density based clustering, Self organizing maps, Text mining, Time series forecasting, Anomaly detection, Feature selection and more... Contains fully updated content on data science, including tactics on how to mine business data for information Presents simple explanations for over twenty powerful data science techniques Enables the practical use of data science algorithms without the need for programming Demonstrates processes with practical use cases Introduces each algorithm or technique and explains the workings of a data science algorithm in plain language Describes the commonly used setup options for the open source tool RapidMiner

The contemporary world lives on the data produced at an unprecedented speed through social networks and the internet of things (IoT). Data has been called the new global currency, and its rise is transforming entire industries, providing a wealth of opportunities. Applied data science research is necessary to derive useful information from big data for the effective and efficient utilization to solve real-world problems. A broad analytical set allied with strong business logic is fundamental in today's corporations. Organizations work to obtain competitive advantage by analyzing the data produced within and outside their organizational limits to support their decision-making processes. This book aims to provide an

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overview of the concepts, tools, and techniques behind the fields of data science and artificial intelligence (AI) applied to business and industries. The Handbook of Research on Applied Data Science and Artificial Intelligence in Business and Industry discusses all stages of data science to AI and their application to real problems across industries—from science and engineering to academia and commerce. This book brings together practice and science to build successful data solutions, showing how to uncover hidden patterns and leverage them to improve all aspects of business performance by making sense of data from both web and offline environments. Covering topics including applied AI, consumer behavior analytics, and machine learning, this text is essential for data scientists, IT specialists, managers, executives, software and computer engineers, researchers, practitioners, academicians, and students.

Who is most likely to buy and what is the best way to target them? Marketing Analytics enables marketers and business analysts to answer these questions by leveraging proven methodologies to measure and improve upon the effectiveness of marketing programs. Marketing Analytics demonstrates how statistics, analytics and modeling can be put to optimal use to increase the effectiveness of every day marketing activities, from targeted list creation and data segmentation to testing campaign effectiveness and forecasting demand. The author explores many common marketing challenges and demonstrates how to apply different data models to arrive at viable solutions. Business cases and critical analysis are included to illustrate and reinforce key concepts throughout. Beginners will benefit from clear, jargon-free explanations of methodologies relating to statistics, marketing strategy and consumer behaviour. More experienced practitioners will appreciate the more complex aspects of data analytics and data modeling, discovering new applications of various techniques in every day practice. Readers of Marketing Analytics will come away with a firm foundation in markets analytics and the tools they need to gain competitive edge and increase market share. Online supporting resources for this book include a bank of test questions as well as data sets relating to many of the chapters. Learn what it takes to succeed in the the most in-demand tech job Harvard Business Review calls it the sexiest tech job of the 21st century. Data scientists are in demand, and this unique book shows you exactly what employers want and the skill set that separates the quality data scientist from other talented IT professionals. Data science involves extracting, creating, and processing data to turn it into business value. With over 15 years of big data, predictive modeling, and business analytics experience, author Vincent Granville is no stranger to data science. In this one-of-a-kind guide, he provides insight into the essential data science skills, such as statistics and visualization techniques, and covers everything from analytical recipes and data science tricks to common job interview questions, sample resumes, and source code. The applications are endless and varied: automatically detecting spam and plagiarism, optimizing bid prices in keyword advertising, identifying new molecules to fight cancer,

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assessing the risk of meteorite impact. Complete with case studies, this book is a must, whether you're looking to become a data scientist or to hire one. Explains the finer points of data science, the required skills, and how to acquire them, including analytical recipes, standard rules, source code, and a dictionary of terms Shows what companies are looking for and how the growing importance of big data has increased the demand for data scientists Features job interview questions, sample resumes, salary surveys, and examples of job ads Case studies explore how data science is used on Wall Street, in botnet detection, for online advertising, and in many other business-critical situations Developing Analytic Talent: Becoming a Data Scientist is essential reading for those aspiring to this hot career choice and for employers seeking the best candidates.

This book is a refreshingly practical yet theoretically sound roadmap to leveraging data analytics and data science. The vast amount of data generated about us and our world is useless without plans and strategies that are designed to cope with its size and complexity, and which enable organizations to leverage the information to create value in marketing. Creating Value with Data Analytics in Marketing provides a nuanced view of big data developments and data science, arguing that big data is not a revolution but an evolution of the increasing availability of data that has been observed in recent times. Building on the authors' extensive academic and practical knowledge, this book aims to provide managers and analysts with strategic directions and practical analytical solutions on how to create value from existing and new big data. The second edition of this bestselling text has been fully updated in line with developments in the field and includes a selection of new, international cases and examples, exercises, techniques and methodologies. Tying data and analytics to specific goals and processes for implementation makes this essential reading for advanced undergraduate and postgraduate students and specialists of data analytics, marketing research, marketing management and customer relationship management. Online resources include chapter-by-chapter lecture slides and data sets and corresponding R code for selected chapters.

Explore new and more sophisticated tools that reduce your marketing analytics efforts and give you precise results Key Features Study new techniques for marketing analytics Explore uses of machine learning to power your marketing analyses Work through each stage of data analytics with the help of multiple examples and exercises Book Description Data Science for Marketing Analytics covers every stage of data analytics, from working with a raw dataset to segmenting a population and modeling different parts of the population based on the segments. The book starts by teaching you how to use Python libraries, such as pandas and Matplotlib, to read data from Python, manipulate it, and create plots, using both categorical and continuous variables. Then, you'll learn how to segment a population into groups and use different clustering techniques to evaluate customer segmentation. As you make your way through the chapters, you'll explore ways to evaluate and select the best segmentation approach, and

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go on to create a linear regression model on customer value data to predict lifetime value. In the concluding chapters, you'll gain an understanding of regression techniques and tools for evaluating regression models, and explore ways to predict customer choice using classification algorithms. Finally, you'll apply these techniques to create a churn model for modeling customer product choices. By the end of this book, you will be able to build your own marketing reporting and interactive dashboard solutions. What you will learn Analyze and visualize data in Python using pandas and Matplotlib Study clustering techniques, such as hierarchical and k-means clustering Create customer segments based on manipulated data Predict customer lifetime value using linear regression Use classification algorithms to understand customer choice Optimize classification algorithms to extract maximal information Who this book is for Data Science for Marketing Analytics is designed for developers and marketing analysts looking to use new, more sophisticated tools in their marketing analytics efforts. It'll help if you have prior experience of coding in Python and knowledge of high school level mathematics. Some experience with databases, Excel, statistics, or Tableau is useful but not necessary.

Optimize your marketing strategies through analytics and machine learning Key Features Understand how data science drives successful marketing campaigns Use machine learning for better customer engagement, retention, and product recommendations Extract insights from your data to optimize marketing strategies and increase profitability Book Description Regardless of company size, the adoption of data science and machine learning for marketing has been rising in the industry. With this book, you will learn to implement data science techniques to understand the drivers behind the successes and failures of marketing campaigns. This book is a comprehensive guide to help you understand and predict customer behaviors and create more effectively targeted and personalized marketing strategies. This is a practical guide to performing simple-to-advanced tasks, to extract hidden insights from the data and use them to make smart business decisions. You will understand what drives sales and increases customer engagements for your products. You will learn to implement machine learning to forecast which customers are more likely to engage with the products and have high lifetime value. This book will also show you how to use machine learning techniques to understand different customer segments and recommend the right products for each customer. Apart from learning to gain insights into consumer behavior using exploratory analysis, you will also learn the concept of A/B testing and implement it using Python and R. By the end of this book, you will be experienced enough with various data science and machine learning techniques to run and manage successful marketing campaigns for your business. What you will learn Learn how to compute and visualize marketing KPIs in Python and R Master what drives successful marketing campaigns with data science Use machine learning to predict customer engagement and lifetime value Make product recommendations that customers are most likely to buy

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Learn how to use A/B testing for better marketing decision making Implement machine learning to understand different customer segments Who this book is for If you are a marketing professional, data scientist, engineer, or a student keen to learn how to apply data science to marketing, this book is what you need! It will be beneficial to have some basic knowledge of either Python or R to work through the examples. This book will also be beneficial for beginners as it covers basic-to-advanced data science concepts and applications in marketing with real-life examples.

Learn data science concepts with real-world examples in SAS! End-to-End Data Science with SAS: A Hands-On Programming Guide provides clear and practical explanations of the data science environment, machine learning techniques, and the SAS programming knowledge necessary to develop machine learning models in any industry. The book covers concepts including understanding the business need, creating a modeling data set, linear regression, parametric classification models, and non-parametric classification models. Real-world business examples and example code are used to demonstrate each process step-by-step. Although a significant amount of background information and supporting mathematics are presented, the book is not structured as a textbook, but rather it is a user's guide for the application of data science and machine learning in a business environment. Readers will learn how to think like a data scientist, wrangle messy data, choose a model, and evaluate the model's effectiveness. New data scientists or professionals who want more experience with SAS will find this book to be an invaluable reference. Take your data science career to the next level by mastering SAS programming for machine learning models.

Now , a leader of Northwestern University's prestigious analytics program presents a fully-integrated treatment of both the business and academic elements of marketing applications in predictive analytics. Writing for both managers and students, Thomas W. Miller explains essential concepts, principles, and theory in the context of real-world applications. Building on Miller's pioneering program, Marketing Data Science thoroughly addresses segmentation, target marketing, brand and product positioning, new product development, choice modeling, recommender systems, pricing research, retail site selection, demand estimation, sales forecasting, customer retention, and lifetime value analysis. Starting where Miller's widely-praised Modeling Techniques in Predictive Analytics left off, he integrates crucial information and insights that were previously segregated in texts on web analytics, network science, information technology, and programming. Coverage includes: The role of analytics in delivering effective messages on the web Understanding the web by understanding its hidden structures Being recognized on the web – and watching your own competitors Visualizing networks and understanding communities within them Measuring sentiment and making recommendations Leveraging key data science methods: databases/data preparation, classical/Bayesian statistics, regression/classification, machine learning, and text

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analytics Six complete case studies address exceptionally relevant issues such as: separating legitimate email from spam; identifying legally-relevant information for lawsuit discovery; gleaning insights from anonymous web surfing data, and more. This text's extensive set of web and network problems draw on rich public-domain data sources; many are accompanied by solutions in Python and/or R. Marketing Data Science will be an invaluable resource for all students, faculty, and professional marketers who want to use business analytics to improve marketing performance.

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Today, successful firms win by understanding their data more deeply than competitors do. In short, they compete based on analytics. Now, in Modeling Techniques in Predictive Analytics, the leader of Northwestern University's prestigious analytics program brings together all the concepts, techniques, and R code you need to excel in analytics. Thomas W. Miller's unique balanced approach combines business context and quantitative tools, appealing to managers, analysts, programmers, and students alike.--

PROFITING FROM MARKETING ANALYTICS: YOUR COMPLETE EXECUTIVE

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ROADMAP “Solid ideas and experiences, well-told, for executives who need higher returns from their analytic investments. Captures many best practices that are consistent with our own experiences at Bain & Company, helping clients develop actionable strategies that deliver sustainable results.” –Bob Bechek, Worldwide Managing Director, Bain & Company “Cesar has explored a complex subject in a clear and useful way as senior marketers look to more effectively leverage the power of data and analytics.” –Bill Brand, Chief Marketing and Business Development Officer, HSN, Inc. “Loaded with meaty lessons from seasoned practitioners, this book defines the guideposts of the Marketing Analytics Age and what it will take for marketing leaders to be successful in it. Cesar Brea has provided a practical playbook for marketers who are ready to make this transition.” –Meredith Callanan, Vice President, Corporate Marketing and Communications, T. Rowe Price “While the field has a lot of books on the statistics of marketing analytics, we also need insights on the organization issues and culture needed to implement successfully. Cesar Brea's Marketing and Sales Analytics has addressed this gap in an interesting and helpful way.” –Scott A. Neslin, Albert Wesley Frey Professor of Marketing, Tuck School of Business, Dartmouth College To successfully apply marketing analytics, executives must orchestrate elements that transcend multiple perspectives and organizational silos. In Marketing and Sales Analytics, leading analytics consultant Cesar Brea shows you exactly how to do this. Brea examines the experiences of 15 leaders who've built high-value analytics capabilities in multiple industries. Then, building on what they've learned, he presents a complete blueprint for implementing and profiting from marketing analytics. You'll learn how to evaluate “ecosystemic” conditions for success, reconcile diverse perspectives to frame the right questions, and organize your people, data, and operating infrastructure to answer them and maximize business results. Brea helps you overcome key challenges ranging from balancing analytic techniques to governance, hidden biases to culture change. He also offers specific guidance on crucial decisions such as “buy vs. build?”, “centralize or decentralize?”, and “hire generalists or specialists?” Whether you lead, practice, or rely on marketing analytics, this guide will help you gain more value—with less frustration. Go beyond “My algorithm can beat up your algorithm” It's not about formulas, it's about cultivating conditions for success Plan backwards, starting from desired business results Focus on value, not allure, hype, or sexiness Orchestrate resources to ask better questions, answer them, and act Tackle any analytically intensive initiative— and get the results you're accountable for Make the most of new “native” digital channels... .. and the rapid digitization of legacy channels, too This book on marketing analytics with Python will quickly get you up and running using practical data science and machine learning to improve your approach to marketing. You'll learn how to analyze sales, understand customer data, predict outcomes, and present conclusions with clear visualizations.

Data science is a multi-disciplinary field that uses scientific methods, processes,

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algorithms, and systems to extract knowledge and insights from structured (labeled) and unstructured (unlabeled) data. It is the future of Artificial Intelligence (AI) and a necessity of the future to make things easier and more productive. In simple terms, data science is the discovery of data or uncovering hidden patterns (such as complex behaviors, trends, and inferences) from data. Moreover, Big Data analytics/data analytics are the analysis mechanisms used in data science by data scientists. Several tools, such as Hadoop, R, etc., are used to analyze this large amount of data to predict valuable information and for decision-making. Note that structured data can be easily analyzed by efficient (available) business intelligence tools, while most of the data (80% of data by 2020) is in an unstructured form that requires advanced analytics tools. But while analyzing this data, we face several concerns, such as complexity, scalability, privacy leaks, and trust issues. Data science helps us to extract meaningful information or insights from unstructured or complex or large amounts of data (available or stored virtually in the cloud). Data Science and Data Analytics: Opportunities and Challenges covers all possible areas, applications with arising serious concerns, and challenges in this emerging field in detail with a comparative analysis/taxonomy. FEATURES Gives the concept of data science, tools, and algorithms that exist for many useful applications Provides many challenges and opportunities in data science and data analytics that help researchers to identify research gaps or problems Identifies many areas and uses of data science in the smart era Applies data science to agriculture, healthcare, graph mining, education, security, etc. Academicians, data scientists, and stockbrokers from industry/business will find this book useful for designing optimal strategies to enhance their firm's productivity.

Learn the techniques and math you need to start making sense of your data About This Book Enhance your knowledge of coding with data science theory for practical insight into data science and analysis More than just a math class, learn how to perform real-world data science tasks with R and Python Create actionable insights and transform raw data into tangible value Who This Book Is For You should be fairly well acquainted with basic algebra and should feel comfortable reading snippets of R/Python as well as pseudo code. You should have the urge to learn and apply the techniques put forth in this book on either your own data sets or those provided to you. If you have the basic math skills but want to apply them in data science or you have good programming skills but lack math, then this book is for you. What You Will Learn Get to know the five most important steps of data science Use your data intelligently and learn how to handle it with care Bridge the gap between mathematics and programming Learn about probability, calculus, and how to use statistical models to control and clean your data and drive actionable results Build and evaluate baseline machine learning models Explore the most effective metrics to determine the success of your machine learning models Create data visualizations that communicate actionable insights Read and apply machine learning concepts to your problems

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and make actual predictions In Detail Need to turn your skills at programming into effective data science skills? Principles of Data Science is created to help you join the dots between mathematics, programming, and business analysis. With this book, you'll feel confident about asking—and answering—complex and sophisticated questions of your data to move from abstract and raw statistics to actionable ideas. With a unique approach that bridges the gap between mathematics and computer science, this books takes you through the entire data science pipeline. Beginning with cleaning and preparing data, and effective data mining strategies and techniques, you'll move on to build a comprehensive picture of how every piece of the data science puzzle fits together. Learn the fundamentals of computational mathematics and statistics, as well as some pseudocode being used today by data scientists and analysts. You'll get to grips with machine learning, discover the statistical models that help you take control and navigate even the densest datasets, and find out how to create powerful visualizations that communicate what your data means. Style and approach This is an easy-to-understand and accessible tutorial. It is a step-by-step guide with use cases, examples, and illustrations to get you well-versed with the concepts of data science. Along with explaining the fundamentals, the book will also introduce you to slightly advanced concepts later on and will help you implement these techniques in the real world.

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 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

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. This up-to-the-minute reference will help you master all three facets of sports analytics — and use it to win! Sports Analytics and Data Science is the most accessible and practical guide to sports analytics for everyone who cares about winning and everyone who is interested in data science. You'll discover how successful sports analytics blends business and sports savvy, modern information technology, and sophisticated modeling techniques. You'll master the discipline through realistic sports vignettes and intuitive data visualizations—not complex math. Every chapter focuses on one key sports analytics application. Miller guides you through assessing players and teams, predicting scores and making game-day decisions, crafting brands and marketing messages, increasing revenue and profitability, and much more. Step by step, you'll learn how analysts transform raw data and analytical models into wins: both on the field and in

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any sports business.

A comprehensive guide to advanced marketing automation for marketing strategists, data scientists, product managers, and software engineers. The book covers the main areas of marketing that require programmatic micro-decisioning - targeted promotions and advertisements, eCommerce search, recommendations, pricing, and assortment optimization. Master modern web and network data modeling: both theory and applications. In *Web and Network Data Science*, a top faculty member of Northwestern University's prestigious analytics program presents the first fully-integrated treatment of both the business and academic elements of web and network modeling for predictive analytics. Some books in this field focus either entirely on business issues (e.g., *Google Analytics and SEO*); others are strictly academic (covering topics such as sociology, complexity theory, ecology, applied physics, and economics). This text gives today's managers and students what they really need: integrated coverage of concepts, principles, and theory in the context of real-world applications. Building on his pioneering *Web Analytics* course at Northwestern University, Thomas W. Miller covers usability testing, Web site performance, usage analysis, social media platforms, search engine optimization (SEO), and many other topics. He balances this practical coverage with accessible and up-to-date introductions to both social network analysis and network science, demonstrating how these disciplines can be used to solve real business problems.

Interest in predictive analytics of big data has grown exponentially in the four years since the publication of *Statistical and Machine-Learning Data Mining: Techniques for Better Predictive Modeling and Analysis of Big Data, Second Edition*. In the third edition of this bestseller, the author has completely revised, reorganized, and repositioned the original chapters and produced 13 new chapters of creative and useful machine-learning data mining techniques. In sum, the 43 chapters of simple yet insightful quantitative techniques make this book unique in the field of data mining literature. What is new in the Third Edition: The current chapters have been completely rewritten. The core content has been extended with strategies and methods for problems drawn from the top predictive analytics conference and statistical modeling workshops. Adds thirteen new chapters including coverage of data science and its rise, market share estimation, share of wallet modeling without survey data, latent market segmentation, statistical regression modeling that deals with incomplete data, decile analysis assessment in terms of the predictive power of the data, and a user-friendly version of text mining, not requiring an advanced background in natural language processing (NLP). Includes SAS subroutines which can be easily converted to other languages. As in the previous edition, this book offers detailed background, discussion, and illustration of specific methods for solving the most commonly experienced problems in predictive modeling and analysis of big data. The author addresses each methodology and assigns its application to a specific type of problem. To better ground readers, the book provides an in-depth discussion of the basic methodologies of predictive modeling and analysis. While this type of overview has been attempted before, this approach offers a truly nitty-gritty, step-by-step method that both tyros and experts in the field can enjoy playing with.

Data science is emerging as a field that is revolutionizing science and industries alike. Work across nearly all domains is becoming more data driven, affecting both the jobs that are available and the skills that are required. As more data and ways of analyzing them become available, more aspects of the economy, society, and daily life will become dependent on data. It is imperative that educators, administrators, and students begin today to consider how to best prepare for and keep pace with this data-driven era of tomorrow. Undergraduate teaching, in particular, offers a critical link in offering more data science exposure to students and expanding the supply of data science talent. *Data Science for Undergraduates: Opportunities and Options* offers a vision for the emerging discipline of data science at the undergraduate level. This report outlines some considerations and approaches for academic institutions and

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others in the broader data science communities to help guide the ongoing transformation of this field.

Machine Learning and Artificial Intelligence in Marketing and Sales explores the ideas, and the statistical and mathematical concepts, behind Artificial Intelligence (AI) and machine learning models, as applied to marketing and sales, without getting lost in the details of mathematical derivations and computer programming.

Good data analytics is the basis for effective decisions. Whoever has the data, has the ability to extract information promptly and effectively to make pertinent decisions. The premise of this handbook is to empower users and tool developers with the appropriate collection of formulas and techniques for data analytics and to serve as a quick reference to keep pertinent formulas within fingertip reach of readers. This handbook includes formulas that will appeal to mathematically inclined readers. It discusses how to use data analytics to improve decision-making and is ideal for those new to using data analytics to show how to expand their usage horizon. It provides quantitative techniques for modeling pandemics, such as COVID-19. It also adds to the suite of mathematical tools for emerging technical areas. This handbook is a handy reference for researchers, practitioners, educators, and students in areas such as industrial engineering, production engineering, project management, civil engineering, mechanical engineering, technology management, and business management worldwide.

Marketing Analytics: Strategic Models and Metrics offers marketing students and professionals a practical guide to strategic decision models and marketing metrics. The tools described in the book will aid marketers in making intelligent decisions to drive revenue and results in their organizations. The book contains a wealth of information on marketing analytics: Almost 500 pages of text, covering a wide variety of decision models and metrics Nearly 400 figures, including diagrams, tables, and charts Step-by-step instructions on market segmentation, conjoint analysis, and other techniques Current examples demonstrating how organizations are applying models and metrics The list of chapters below includes a sample of the topics: Chapter 1. Introduction - Introduction to marketing analytics Chapter 2. Market Insight - Market sizing and trend analysis Chapter 3. Market Segmentation - Segment identification, analysis, and strategy Chapter 4. Competitive Analysis - Competitor identification, analysis, and strategy Chapter 5. Business Strategy - Analytics-based strategy selection Chapter 6. Business Operations - Forecasting, predictive analytics, and data mining Chapter 7. Product and Service Analytics - Conjoint analysis and product/service metrics Chapter 8. Price Analytics - Pricing techniques and assessment Chapter 9. Distribution Analytics - Analytics-based channel evaluation and selection Chapter 10. Promotion Analytics - Promotion budget estimation and allocation Chapter 11. Sales Analytics - Metrics for sales, profitability, and support Chapter 12. Analytics in Action - Pivot tables and data-driven presentations Edition: First Edition, Version 1.1, introduced November 2013. Revision 1.1 incorporates minor corrections and edits. It retains the same layout as the original release (First Edition, Version 1.0). See StephanSorger.com for a complete record of all changes.

Helping tech-savvy marketers and data analysts solvereal-world business problems with Excel Using data-driven business analytics to understand

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customers and improve results is a great idea in theory, but in today's busy offices, marketers and analysts need simple, low-cost ways to process and make the most of all that data. This expert book offers the perfect solution. Written by data analysis expert Wayne L. Winston, this practical resource shows you how to tap a simple and cost-effective tool, Microsoft Excel, to solve specific business problems using powerful analytic techniques—and achieve optimum results. Practical exercises in each chapter help you apply and reinforce techniques as you learn. Shows you how to perform sophisticated business analyses using the cost-effective and widely available Microsoft Excel instead of expensive, proprietary analytical tools Reveals how to target and retain profitable customers and avoid high-risk customers Helps you forecast sales and improve response rates for marketing campaigns Explores how to optimize price points for products and services, optimize store layouts, and improve online advertising Covers social media, viral marketing, and how to exploit both effectively Improve your marketing results with Microsoft Excel and the invaluable techniques and ideas in *Marketing Analytics: Data-Driven Techniques with Microsoft Excel*.

Data Science gets thrown around in the press like it's magic. Major retailers are predicting everything from when their customers are pregnant to when they want a new pair of Chuck Taylors. It's a brave new world where seemingly meaningless data can be transformed into valuable insight to drive smart business decisions. But how does one exactly do data science? Do you have to hire one of these priests of the dark arts, the "data scientist," to extract this gold from your data? Nope. Data science is little more than using straight-forward steps to process raw data into actionable insight. And in *DataSmart*, author and data scientist John Foreman will show you how that's done within the familiar environment of a spreadsheet. Why a spreadsheet? It's comfortable! You get to look at the data every step of the way, building confidence as you learn the tricks of the trade. Plus, spreadsheets are a vendor-neutral place to learn data science without the hype. But don't let the Excel sheets fool you. This is a book for those serious about learning the analytic techniques, the math and the magic, behind big data. Each chapter will cover a different technique in a spreadsheet so you can follow along: Mathematical optimization, including non-linear programming and genetic algorithms Clustering via k-means, spherical k-means, and graph modularity Data mining in graphs, such as outlier detection Supervised AI through logistic regression, ensemble models, and bag-of-words models Forecasting, seasonal adjustments, and prediction intervals through monte carlo simulation Moving from spreadsheets into the R programming language You get your hands dirty as you work alongside John through each technique. But never fear, the topics are readily applicable and the author laces humor throughout. You'll even learn what a dead squirrel has to do with optimization modeling, which you no doubt are dying to know.

? This book includes 2 Manuscripts? Are you looking for new ways to grow your business, with resources you already have? Do you want to know how the big

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players like Netflix, Amazon, or Shopify use data analytics to MULTIPLY their growth? Keep listening to learn how to use data analytics to maximize YOUR business.

Who is most likely to buy and what is the best way to target them? How can businesses improve strategy without identifying the key influencing factors? The second edition of Marketing Analytics enables marketers and business analysts to leverage predictive techniques to measure and improve marketing performance. By exploring real-world marketing challenges, it provides clear, jargon-free explanations on how to apply different analytical models for each purpose. From targeted list creation and data segmentation, to testing campaign effectiveness, pricing structures and forecasting demand, this book offers a welcome handbook on how statistics, consumer analytics and modelling can be put to optimal use. The fully revised second edition of Marketing Analytics includes three new chapters on big data analytics, insights and panel regression, including how to collect, separate and analyze big data. All of the advanced tools and techniques for predictive analytics have been updated, translating models such as tobit analysis for customer lifetime value into everyday use. Whether an experienced practitioner or having no prior knowledge, methodologies are simplified to ensure the more complex aspects of data and analytics are fully accessible for any level of application. Complete with downloadable data sets and test bank resources, this book supplies a concrete foundation to optimize marketing analytics for day-to-day business advantage.

Using Python and R, the author addresses multiple business challenge, including segmentation, brand positioning, product choice modeling, pricing research, finance, sports, text analytics, sentiment analysis and social network analysis, cross sectional data, time series, spatial and spatio-temporal data.

Statistical Foundations of Data Science gives a thorough introduction to commonly used statistical models, contemporary statistical machine learning techniques and algorithms, along with their mathematical insights and statistical theories. It aims to serve as a graduate-level textbook and a research monograph on high-dimensional statistics, sparsity and covariance learning, machine learning, and statistical inference. It includes ample exercises that involve both theoretical studies as well as empirical applications. The book begins with an introduction to the stylized features of big data and their impacts on statistical analysis. It then introduces multiple linear regression and expands the techniques of model building via nonparametric regression and kernel tricks. It provides a comprehensive account on sparsity explorations and model selections for multiple regression, generalized linear models, quantile regression, robust regression, hazards regression, among others. High-dimensional inference is also thoroughly addressed and so is feature screening. The book also provides a comprehensive account on high-dimensional covariance estimation, learning latent factors and hidden structures, as well as their applications to statistical estimation, inference, prediction and machine learning problems. It also

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introduces thoroughly statistical machine learning theory and methods for classification, clustering, and prediction. These include CART, random forests, boosting, support vector machines, clustering algorithms, sparse PCA, and deep learning.

Handbook of Statistical Analysis and Data Mining Applications, Second Edition, is a comprehensive professional reference book that guides business analysts, scientists, engineers and researchers, both academic and industrial, through all stages of data analysis, model building and implementation. The handbook helps users discern technical and business problems, understand the strengths and weaknesses of modern data mining algorithms and employ the right statistical methods for practical application. This book is an ideal reference for users who want to address massive and complex datasets with novel statistical approaches and be able to objectively evaluate analyses and solutions. It has clear, intuitive explanations of the principles and tools for solving problems using modern analytic techniques and discusses their application to real problems in ways accessible and beneficial to practitioners across several areas—from science and engineering, to medicine, academia and commerce. Includes input by practitioners for practitioners Includes tutorials in numerous fields of study that provide step-by-step instruction on how to use supplied tools to build models Contains practical advice from successful real-world implementations Brings together, in a single resource, all the information a beginner needs to understand the tools and issues in data mining to build successful data mining solutions Features clear, intuitive explanations of novel analytical tools and techniques, and their practical applications

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