Customer Analytics With Sas Enterprise Miner Hands On Workshop

This example-driven guide illustrates the application and operation of decision trees in data mining, business intelligence, business analytics, prediction, and knowledge discovery. It explains in detail the use of decision trees as a data mining technique and how this technique complements and supplements other business intelligence applications.

This tutorial for data analysts new to SAS Enterprise Guide and SAS Enterprise Miner provides valuable experience using powerful statistical software to complete the kinds of business analytics common to most industries. This beginnner's guide with clear, illustrated, step-by-step instructions will lead you through examples based on business case studies. You will formulate the business objective, manage the data, and perform analyses that you can use to optimize marketing, risk, and customer relationship management, as well as business processes and human resources. Topics include descriptive analysis, predictive modeling and analytics, customer segmentation, market analysis, share-of-wallet analysis, penetration analysis, and business intelligence. --

Many marketing researchers, companies and business schools need to use statistical procedures and accurately interpret the result, that's why the SAS® Enterprise Guide software, which uses a user-friendly drag-and-drop menu to extract statistical information, is so popular. Marketing Research with SAS Enterprise

Guide includes 236 screen shots to provide a detailed explanation of the SAS® Enterprise Guide software. Based on a step-by-step approach and real managerial situations, it guides the reader to an understanding of the use of statistical methods. It demonstrates ways of extracting information, collating it to provide reliable knowledge, and how to use these insights to solve day-to-day business and research problems. SAS ® offers a stand-alone marketing research tool by means of the SAS® OnDemand Enterprise Guide solution for academics and business professionals. This straightforward, pragmatic reference manual will help: - 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

Key decisions determine the success of big data strategy Dynamic Customer Strategy: Big Profits from Big Data is a comprehensive guide to exploiting big data for both business-to-consumer and business-to-business marketing. This complete guide provides a process for rigorous decision making in navigating the data-driven industry shift, informing marketing practice, and aiding businesses in early adoption. Using data from a five-year study to illustrate important concepts and scenarios along the way, the author speaks directly to marketing and operations professionals who may not necessarily be big data savvy. With expert insight and clear analysis, the book helps eliminate paralysis-by-analysis and optimize decision making for marketing performance. Nearly seventy-five percent of marketers plan to adopt a big data analytics solution within two years, but many are likely to fail. Despite intensive planning, generous spending, and the best intentions, these initiatives will not succeed without a manager at the helm who is capable of handling the nuances of big data projects. This requires a new way of marketing, and a new

approach to data. It means applying new models and metrics to brand new consumer behaviors. Dynamic Customer Strategy clarifies the situation, and highlights the key decisions that have the greatest impact on a company's big data plan. Topics include: Applying the elements of Dynamic Customer Strategy Acquiring, mining, and analyzing data Metrics and models for big data utilization Shifting perspective from model to customer Big data is a tremendous opportunity for marketers and may just be the only factor that will allow marketers to keep pace with the changing consumer and thus keep brands relevant at a time of unprecedented choice. But like any tool, it must be wielded with skill and precision. Dynamic Customer Strategy: Big Profits from Big Data helps marketers shape a strategy that works. Written for anyone involved in the data preparation process for analytics, Gerhard Svolba's Data Preparation for Analytics Using SAS offers practical advice in the form of SAS coding tips and tricks, and provides the reader with a conceptual background on data structures and considerations from a business point of view. The tasks addressed include viewing analytic data preparation in the context of its business environment, identifying the specifics of predictive modeling for data mart creation, understanding the concepts and considerations of data preparation for time series analysis, using various SAS procedures and SAS Enterprise Miner for scoring, creating meaningful derived variables for all data mart types, using powerful SAS macros to make changes among the various data mart structures, and more!

Foreword by Oliver Schabenberger, PhD Executive Vice President, Chief Operating Officer and Chief Technology Officer SAS Dive into deep learning! Machine learning and deep learning are ubiquitous in our homes and workplaces—from machine translation to image recognition and predictive analytics to autonomous driving. Deep learning holds the promise of improving many everyday tasks in a variety of disciplines. Much deep learning literature explains the mechanics of deep learning with the goal of implementing cognitive applications fueled by Big Data. This book is different. Written by an expert in high-performance analytics, Deep Learning for Numerical Applications with SAS introduces a new field: Deep Learning for Numerical Applications (DL4NA). Contrary to deep learning, the primary goal of DL4NA is not to learn from data but to dramatically improve the performance of numerical applications by training deep neural networks. Deep Learning for Numerical Applications with SAS presents deep learning concepts in SAS along with step-by-step techniques that allow you to easily reproduce the examples on your high-performance analytics systems. It also discusses the latest hardware innovations that can power your SAS programs: from many-core CPUs to GPUs to FPGAs to ASICs. This book assumes the reader has no prior knowledge of high-performance computing, machine learning, or deep learning. It is intended for SAS developers who want to develop and run the fastest analytics. In addition to discovering the latest trends in hybrid architectures with GPUs and FPGAS, readers will learn how to Use deep learning in SAS Speed up their

analytics using deep learning Easily write highly parallel programs using the many task computing paradigms This book is part of the SAS Press program.
New and updated for SAS Enterprise Guide 4.2, this pragmatic, example-driven book demonstrates how programmers can use SAS code to enhance the capabilities of SAS Enterprise Guide.
In Customer Segmentation and Clustering Using SAS Enterprise Miner, Second Edition, Randy Collica employs SAS Enterprise Miner and the most commonly available techniques for customer relationship management (CRM). You will learn how to segment customers more intelligently and to achieve, or at least get closer to, the one-to-one customer relationship that today's businesses want. Step-by-step examples and exercises clearly illustrate the concepts of segmentation and clustering in the context of CRM. The book is divided into four parts. Part 1 reviews the basics of segmentation and clustering at an introductory level, providing examples from a variety of industries. Part 2 offers an in-depth treatment of segmentation with practical topics such as when and how to update your models and clustering with many attributes. Part 3 goes beyond traditional segmentation practices to introduce recommended strategies for clustering product affinities, handling missing data, and incorporating textual records into your predictive model with SAS Text Miner software. Part 4 takes segmentation to a new level with advanced techniques such as clustering of product associations, developing segmentation scoring models from customer survey data, combining segmentations using ensemble

segmentation, and segmentation of customer transactions. Updates to the second edition include four new chapters in Part 4, Chapters 13-16, that introduce new and advanced analytic techniques that can be valuable in many customer segmentation applications. In addition, Chapter 9 has a new section on using the Imputation node in SAS Enterprise Miner to accomplish missing data imputation, compared to PROC MI used in earlier sections of Chapter 9. Also included are business insights and motivations for selection settings and analytical decisions on many of the examples included in this second edition. This straightforward guide will appeal to anyone who seeks to better understand customers or prospective customers. Additionally, professors and students will find the book well suited for a business data mining analytics course in an MBA program or related course of study. You should understand basic statistics, but no prior knowledge of data mining or SAS Enterprise Miner is required.SAS Products and Releases: SAS Enterprise Miner

Solve business problems involving time-to-event and resulting probabilities by following the modeling tutorials in Business Survival Analysis Using SAS: An Introduction to Lifetime Probabilities, the first book to be published in the field of business survival analysis! Survival analysis is a challenge. Books applying to health sciences exist, but nothing about survival applications for business has been available until now. Written for analysts, forecasters, econometricians, and modelers who work in marketing or credit risk and have little SAS modeling experience, Business Survival Analysis Using

SAS builds on a foundation of SAS code that works in any survival model and features numerous annotated graphs, coefficients, and statistics linked to real business situations and data sets. This guide also helps recent graduates who know the statistics but do not necessarily know how to apply them get up and running in their jobs. By example, it teaches the techniques while avoiding advanced theoretical underpinnings so that busy professionals can rapidly deliver a survival model to meet common business needs. From first principles, this book teaches survival analysis by highlighting its relevance to business cases. A pragmatic introduction to survival analysis models, it leads you through business examples that contextualize and motivate the statistical methods and SAS coding. Specifically, it illustrates how to build a time-to-next-purchase survival model in SAS Enterprise Miner, and it relates each step to the underlying statistics and to Base SAS and SAS/STAT software. Following the many examples-from data preparation to validation to scoring new customers-you will learn to develop and apply survival analysis techniques to scenarios faced by companies in the financial services, insurance, telecommunication, and marketing industries, including the following scenarios: Time-to-next-purchase for marketing Employer turnover for human resources Small business portfolio macroeconometric stress tests for banks International Financial Reporting Standard (IFRS 9) lifetime probability of default for banks and building societies "Churn," or attrition, models for the telecommunications and insurance industries

SAS Programming for R Users, based on the free SAS Education course of the same name, is designed for experienced R users who want to transfer their programming skills to SAS. Emphasis is on programming and not statistical theory or interpretation. You will learn how to write programs in SAS that replicate familiar functions and capabilities in R. This book covers a wide range of topics including the basics of the SAS programming language, how to import data, how to create new variables, random number generation, linear modeling, Interactive Matrix Language (IML), and many other SAS procedures. This book also explains how to write R code directly in the SAS code editor for seamless integration between the two tools. Exercises are provided at the end of each chapter so that you can test your knowledge and practice your programming skills. Learning to use SAS Enterprise Guide has never been easier! Whether you are using SAS Enterprise Guide for the first time, or are looking to expand your skills, this is the book for you! With The Little SAS Enterprise Guide Book, award-winning authors Susan Slaughter and Lora Delwiche help you quickly become productive in the SAS Enterprise Guide point-and-click environment. A series of carefully designed tutorials help you master the basics of the tasks you'll want to do most frequently. The reference section of the book expands on the tutorial topics, covering specific features in more depth. This edition has been completely rewritten, and updated with new features in SAS Enterprise Guide.
Statistical Data Mining Using SAS Applications, Second Edition describes statistical data mining concepts and

demonstrates the features of user-friendly data mining SAS tools. Integrating the statistical and graphical analysis tools available in SAS systems, the book provides complete statistical data mining solutions without writing SAS program co

SAS provides many different solutions to investigate and analyze text and operationalize decisioning. Several impressive papers have been written to demonstrate how to use these techniques. We have carefully selected a handful of these from recent Global Forum contributions to introduce you to the topic and let you sample what each has to offer. Also available free as a PDF from sas.com/books.

This is the first book to present time series analysis using the SAS Enterprise Guide software. It includes some starting background and theory to various time series analysis techniques, and demonstrates the data analysis process and the final results via step-by-step extensive illustrations of the SAS Enterprise Guide software. This book is a practical guide to time series analyses in SAS Enterprise Guide, and is valuable resource that benefits a wide variety of sectors.

Leverage the capabilities of SAS to process and analyze Big Data About This Book Combine SAS with platforms such as Hadoop, SAP HANA, and Cloud Foundry-based platforms for effecient Big Data analytics Learn how to use the web browser-based SAS Studio and iPython Jupyter Notebook interfaces with SAS Practical, real-world examples on predictive modeling, forecasting, optimizing and reporting your Big Data analysis with SAS Who This Book Is For SAS professionals and data

analysts who wish to perform analytics on Big Data using SAS to gain actionable insights will find this book to be very useful. If you are a data science professional looking to perform large-scale analytics with SAS, this book will also help you. A basic understanding of SAS will be helpful, but is not mandatory. What You Will Learn Configure a free version of SAS in order do hands-on exercises dealing with data management, analysis, and reporting. Understand the basic concepts of the SAS language which consists of the data step (for data preparation) and procedures (or PROCs) for analysis. Make use of the web browser based SAS Studio and iPython Jupyter Notebook interfaces for coding in the SAS, DS2, and FedSQL programming languages. Understand how the DS2 programming language plays an important role in Big Data preparation and analysis using SAS Integrate and work efficiently with Big Data platforms like Hadoop, SAP HANA, and cloud foundry based systems. In Detail SAS has been recognized by Money Magazine and Payscale as one of the top business skills to learn in order to advance one's career. Through innovative data management, analytics, and business intelligence software and services, SAS helps customers solve their business problems by allowing them to make better decisions faster. This book introduces the reader to the SAS and how they can use SAS to perform efficient analysis on any size data, including Big Data. The reader will learn how to prepare data for analysis, perform predictive, forecasting, and optimization analysis and then deploy or report on the results of these analyses. While performing the coding

examples within this book the reader will learn how to use the web browser based SAS Studio and iPython Jupyter Notebook interfaces for working with SAS. Finally, the reader will learn how SAS's architecture is engineered and designed to scale up and/or out and be combined with the open source offerings such as Hadoop, Python, and R. By the end of this book, you will be able to clearly understand how you can efficiently analyze Big Data using SAS. Style and approach The book starts off by introducing the reader to SAS and the SAS programming language which provides data management, analytical, and reporting capabilities. Most chapters include hands on examples which highlights how SAS provides The Power to Know©. The reader will learn that if they are looking to perform large-scale data analysis that SAS provides an open platform engineered and designed to scale both up and out which allows the power of SAS to combine with open source offerings such as Hadoop, Python, and R.

Leverage health data into insight! Applied Health Analytics and Informatics Using SAS describes health anamatics, a result of the intersection of data analytics and health informatics. Healthcare systems generate nearly a third of the world's data, and analytics can help to eliminate medical errors, reduce readmissions, provide evidence-based care, demonstrate quality outcomes, and add cost-efficient care. This comprehensive textbook includes data analytics and health informatics concepts, along with applied experiential learning exercises and case

studies using SAS Enterprise MinerTM within the healthcare industry setting. Topics covered include: Sampling and modeling health data – both structured and unstructured Exploring health data quality Developing health administration and health data assessment procedures Identifying future health trends Analyzing high-performance health data mining models Applied Health Analytics and Informatics Using SAS is intended for professionals, lifelong learners, senior-level undergraduates, graduate-level students in professional development courses, health informatics courses, health analytics courses, and specialized industry track courses. This textbook is accessible to a wide variety of backgrounds and specialty areas, including administrators, clinicians, and executives. This book is part of the SAS Press program.

Extract actionable insights from text and unstructured data. Information extraction is the task of automatically extracting structured information from unstructured or semi-structured text. SAS Text Analytics for Business Applications: Concept Rules for Information Extraction Models focuses on this key element of natural language processing (NLP) and provides real-world guidance on the effective application of text analytics. Using scenarios and data based on business cases across many different domains and industries, the book includes many helpful tips and best practices from SAS text

analytics experts to ensure fast, valuable insight from your textual data. Written for a broad audience of beginning, intermediate, and advanced users of SAS text analytics products, including SAS Visual Text Analytics, SAS Contextual Analysis, and SAS Enterprise Content Categorization, this book provides a solid technical reference. You will learn the SAS information extraction toolkit, broaden your knowledge of rule-based methods, and answer new business questions. As your practical experience grows, this book will serve as a reference to deepen your expertise.

Learn to program SAS by example! Learning SAS by Example, A Programmer's Guide, Second Edition, teaches SAS programming from very basic concepts to more advanced topics. Because most programmers prefer examples rather than reference-type syntax, this book uses short examples to explain each topic. The second edition has brought this classic book on SAS programming up to the latest SAS version, with new chapters that cover topics such as PROC SGPLOT and Perl regular expressions. This book belongs on the shelf (or e-book reader) of anyone who programs in SAS, from those with little programming experience who want to learn SAS to intermediate and even advanced SAS programmers who want to learn new techniques or identify new ways to accomplish existing tasks. In an instructive and conversational

tone, author Ron Cody clearly explains each programming technique and then illustrates it with one or more real-life examples, followed by a detailed description of how the program works. The text is divided into four major sections: Getting Started, DATA Step Processing, Presenting and Summarizing Your Data, and Advanced Topics. Subjects addressed include Reading data from external sources Learning details of DATA step programming Subsetting and combining SAS data sets Understanding SAS functions and working with arrays Creating reports with PROC REPORT and PROC TABULATE Getting started with the SAS macro language Leveraging PROC SQL Generating high-quality graphics Using advanced features of user-defined formats and informats Restructuring SAS data sets Working with multiple observations per subject Getting started with Perl regular expressions You can test your knowledge and hone your skills by solving the problems at the end of each chapter.

Leverage the full potential of SAS to get unique, actionable insights from your data Key Features Build enterprise-class data solutions using SAS and become well-versed in SAS programming Work with different data structures, and run SQL queries to manipulate your data Explore essential concepts and techniques with practical examples to confidently pass the SAS certification exam Book Description

SAS is one of the leading enterprise tools in the world today when it comes to data management and analysis. It enables the fast and easy processing of data and helps you gain valuable business insights for effective decision-making. This book will serve as a comprehensive guide that will prepare you for the SAS certification exam. After a quick overview of the SAS architecture and components, the book will take you through the different approaches to importing and reading data from different sources using SAS. You will then cover SAS Base and 4GL, understanding data management and analysis, along with exploring SAS functions for data manipulation and transformation. Next, you'll discover SQL procedures and get up to speed on creating and validating queries. In the concluding chapters, you'll learn all about data visualization, right from creating bar charts and sample geographic maps through to assigning patterns and formats. In addition to this, the book will focus on macro programming and its advanced aspects. By the end of this book, you will be well versed in SAS programming and have the skills you need to easily handle and manage your data-related problems in SAS. What you will learn Explore a variety of SAS modules and packages for efficient data analysis Use SAS 4GL functions to manipulate, merge, sort, and transform data Gain useful insights into advanced PROC SQL options in SAS to interact with

data Get to grips with SAS Macro and define your own macros to share data Discover the different graphical libraries to shape and visualize data with Apply the SAS Output Delivery System to prepare detailed reports Who this book is for Budding or experienced data professionals who want to get started with SAS will benefit from this book. Those looking to prepare for the SAS certification exam will also find this book to be a useful resource. Some understanding of basic data management concepts will help you get the most out of this book. Examine business problems and use a practical analytical approach to solve them by implementing predictive models and machine learning techniques using SAS and the R analytical language. This book is ideal for those who are well-versed in writing code and have a basic understanding of statistics, but have limited experience in implementing predictive models and machine learning techniques for analyzing real world data. The most challenging part of solving industrial business problems is the practical and hands-on knowledge of building and deploying advanced predictive models and machine learning algorithms. Applied Analytics through Case Studies Using SAS and R is your answer to solving these business problems by sharpening your analytical skills. What You'll Learn Understand analytics and basic data concepts Use an analytical approach to solve Industrial business problems Build

predictive model with machine learning techniques Create and apply analytical strategies Who This Book Is For Data scientists, developers, statisticians, engineers, and research students with a great theoretical understanding of data and statistics who would like to enhance their skills by getting practical exposure in data modeling.

Better understand your customers using segmentation analytics in SAS Viya! Segmentation Analytics with SAS Viya: An Approach to Clustering and Visualization demonstrates the use of clustering and machine learning methods for the purpose of segmenting customer or client data into useful categories for marketing, market research, next best offers by segment, and more. This book highlights the latest and greatest methods available that show the power of SAS Viya while solving typical industry issues. Packed with real-world examples, this book provides readers with practical methods of using SAS Visual Data Mining and Machine Learning (VDMML), SAS Model Studio, SAS Visual Statistics, SAS Visual Analytics, and coding in SAS Studio for segmentation model development and analysis. This book is designed for analysts, data miners, and data scientists who need to use the all in-memory platform of SAS Viya for the purposes of clustering and segmentation. Understanding how customers behave is a primary objective of most organizations, and segmentation is a key analytic method for

achieving that objective.

Decision Trees for Analytics Using SAS Enterprise Miner is the most comprehensive treatment of decision tree theory, use, and applications available in one easy-to-access place. This book illustrates the application and operation of decision trees in business intelligence, data mining, business analytics, prediction, and knowledge discovery. It explains in detail the use of decision trees as a data mining technique and how this technique complements and supplements data mining approaches such as regression, as well as other business intelligence applications that incorporate tabular reports, OLAP, or multidimensional cubes. An expanded and enhanced release of Decision Trees for Business Intelligence and Data Mining Using SAS Enterprise Miner, this book adds up-to-date treatments of boosting and high-performance forest approaches and rule induction. There is a dedicated section on the most recent findings related to bias reduction in variable selection. It provides an exhaustive treatment of the end-to-end process of decision tree construction and the respective considerations and algorithms, and it includes discussions of key issues in decision tree practice. Analysts who have an introductory understanding of data mining and who are looking for a more advanced, in-depth look at the theory and methods of a decision tree approach to business intelligence

and data mining will benefit from this book.
This textbook presents a practical approach to predictive analytics for classroom learning. It focuses on using analytics to solve business problems and compares several different modeling techniques, all explained from examples using the SAS Enterprise Miner software. The authors demystify complex algorithms to show how they can be utilized and explained within the context of enhancing business opportunities. Each chapter includes an opening vignette that provides real-life example of how business analytics have been used in various aspects of organizations to solve issue or improve their results. A running case provides an example of a how to build and analyze a complex analytics model and utilize it to predict future outcomes.
Practical Business Analytics Using SAS: A Hands-on Guide shows SAS users and businesspeople how to analyze data effectively in real-life business scenarios. The book begins with an introduction to analytics, analytical tools, and SAS programming. The authors—both SAS, statistics, analytics, and big data experts—first show how SAS is used in business, and then how to get started programming in SAS by importing data and learning how to manipulate it. Besides illustrating SAS basic functions, you will see how each function can be used to get the information you need to improve business performance. Each chapter offers hands-on exercises drawn from real business situations. The book then provides an overview of statistics, as well as instruction on exploring data, preparing it for analysis, and testing hypotheses. You will learn how to use SAS to perform analytics and model using

both basic and advanced techniques like multiple regression, logistic regression, and time series analysis, among other topics. The book concludes with a chapter on analyzing big data. Illustrations from banking and other industries make the principles and methods come to life. Readers will find just enough theory to understand the practical examples and case studies, which cover all industries. Written for a corporate IT and programming audience that wants to upgrade skills or enter the analytics field, this book includes: More than 200 examples and exercises, including code and datasets for practice. Relevant examples for all industries. Case studies that show how to use SAS analytics to identify opportunities, solve complicated problems, and chart a course. Practical Business Analytics Using SAS: A Hands-on Guide gives you the tools you need to gain insight into the data at your fingertips, predict business conditions for better planning, and make excellent decisions. Whether you are in retail, finance, healthcare, manufacturing, government, or any other industry, this book will help your organization increase revenue, drive down costs, improve marketing, and satisfy customers better than ever before.

This tutorial for data analysts new to SAS Enterprise Guide and SAS Enterprise Miner provides valuable experience using powerful statistical software to complete the kinds of business analytics common to most industries. Today's businesses increasingly use data to drive decisions that keep them competitive. Especially with the influx of big data, the importance of data analysis to improve every dimension of business cannot be overstated. Data analysts are therefore in demand; however, many hires and prospective hires, although talented with respect to business and statistics, lack the know-how to perform business analytics with advanced statistical software. Business Analytics Using SAS Enterprise Guide and SAS Enterprise Miner is a beginner's guide with

clear, illustrated, step-by-step instructions that will lead you through examples based on business case studies. You will formulate the business objective, manage the data, and perform analyses that you can use to optimize marketing, risk, and customer relationship management, as well as business processes and human resources. Topics include descriptive analysis, predictive modeling and analytics, customer segmentation, market analysis, share-of-wallet analysis, penetration analysis, and business intelligence. This book is part of the SAS Press program.

Understanding your customers is the key to your company's success! Segmentation is one of the first and most basic machine learning methods. It can be used by companies to understand their customers better, boost relevance of marketing messaging, and increase efficacy of predictive models. In Customer Segmentation and Clustering Using SAS Enterprise Miner, Third Edition, Randy Collica explains, in step-by-step fashion, the most commonly available techniques for segmentation using the powerful data mining software SAS Enterprise Miner. A working guide that uses real-world data, this new edition will show you how to segment customers more intelligently and achieve the one-to-one customer relationship that your business needs. Step-by-step examples and exercises, using a number of machine learning and data mining techniques, clearly illustrate the concepts of segmentation and clustering in the context of customer relationship management. The book includes four parts, each of which increases in complexity. Part 1 reviews the basics of segmentation and clustering at an introductory level, providing examples from a variety of industries. Part 2 offers an in-depth treatment of segmentation with practical topics, such as when and how to update your models. Part 3 goes beyond traditional segmentation practices to introduce recommended strategies for clustering product affinities,

handling missing data, and incorporating textual records into your predictive model with SAS Text Miner. Finally, part 4 takes segmentation to a new level with advanced techniques, such as clustering of product associations, developing segmentation-scoring models from customer survey data, combining segmentations using ensemble segmentation, and segmentation of customer transactions. New to the third edition is a chapter that focuses on predictive models within microsegments and combined segments, and a new parallel process technique is introduced using SAS Factory Miner. In addition, all examples have been updated to the latest version of SAS Enterprise Miner.

Make personalized marketing a reality with this practical guideto predictive analytics Predictive Marketing is a predictive analytics primer fororganizations large and small, offering practical tips andactionable strategies for implementing more personalized marketingimmediately. The marketing paradigm is changing, and this bookprovides a blueprint for navigating the transition from creative-to data-driven marketing, from one-size-fits-all to one-on-one, andfrom marketing campaigns to real-time customer experiences. You'lllearn how to use machine-learning technologies to improve customeracquisition and customer growth, and how to identify and re-engageat-risk or lapsed customers by implementing an easy, automatedapproach to predictive analytics. Much more than just theory andtestament to the power of personalized marketing, this book focuseson action, helping you understand and actually begin using thisrevolutionary approach to the customer experience. Predictive analytics can finally make personalized marketing areality. For the first time, predictive marketing is accessible toall marketers, not just those at large corporations — infact, many smaller organizations are leapfrogging their largercounterparts with innovative programs. This book

shows you how tobring predictive analytics to your organization, with actionableguidance that get you started today. Implement predictive marketing at any size organization Deliver a more personalized marketing experience Automate predictive analytics with machine learningtechnology Base marketing decisions on concrete data rather than unprovenideas Marketers have long been talking about delivering personalizedexperiences across channels. All marketers want to deliverhappiness, but most still employ a one-size-fits-all approach.Predictive Marketing provides the information and insightyou need to lift your organization out of the campaign rut and intothe rarefied atmosphere of a truly personalized customerexperience. A working guide that uses real-world data, this step-by-step resource will show you how to segment customers more intelligently and achieve the one-to-one customer relationship that your business needs. --

The fun and easy way to learn to use this leading business intelligence tool Written by an author team who is directly involved with SAS, this easy-to-follow guide is fully updated for the latest release of SAS and covers just what you need to put this popular software to work in your business. SAS allows any business or enterprise to improve data delivery, analysis, reporting, movement across a company, data mining, forecasting, statistical analysis, and more. SAS For Dummies, 2nd Edition gives you the necessary background on what SAS can do for you and explains how to use the Enterprise Guide. SAS provides statistical and data analysis tools to help you deal with all kinds of data: operational, financial, performance, and more Places special emphasis on Enterprise Guide and other analytical tools, covering all commonly used features Covers all commonly used features and shows you the practical applications you can put to work in your business Explores how to get various types of data

into the software and how to work with databases Covers producing reports and Web reporting tools, analytics, macros, and working with your data In the easy-to-follow, no-nonsense For Dummies format, SAS For Dummies gives you the knowledge and the confidence to get SAS working for your organization. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

« Written for business analysts, data scientists, statisticians, students, predictive modelers, and data miners, this comprehensive text provides examples that will strengthen your understanding of the essential concepts and methods of predictive modeling. »--

This book presents the basic procedures for utilizing SAS Enterprise Guide to analyze statistical data. SAS Enterprise Guide is a graphical user interface (point and click) to the main SAS application. Each chapter contains a brief conceptual overview and then guides the reader through concrete step-by-step examples to complete the analyses. The eleven sections of the book cover a wide range of statistical procedures including descriptive statistics, correlation and simple regression, t tests, one-way chi square, data transformations, multiple regression, analysis of variance, analysis of covariance, multivariate analysis of variance, factor analysis, and canonical correlation analysis. Designed to be used either as a stand-alone resource or as an accompaniment to a statistics course, the book offers a smooth path to statistical analysis with SAS Enterprise Guide for advanced undergraduate and beginning graduate students, as well as professionals in psychology, education, business, health, social work, sociology, and many other fields.

In today's competitive marketplace, customer relationshipmanagement is critical to a company's

profitability andlong-term success. To become more customer focused, skilledmanagers, IT professionals and marketing executives must understandhow to build profitable relationships with each customer and tomake managerial decisions every day designed to increase the valueof a company by making managerial decisions that will grow thevalue of the customer base. The goal is to build long-termrelationships with customers and generate increased customerloyalty and higher margins. In Managing Customer Relationships, DonPeppers and Martha Rogers, credited with founding thecustomer-relationship revolution in 1993 when they invented theterm "one-to-one marketing," provide the definitive overview ofwhat it takes to keep customers coming back for years to come. Presenting a comprehensive framework for customer relationshipmanagement, Managing Customer Relationships provides CEOs, CFOs,CIOs, CMOs, privacy officers , human resources managers, marketingexecutives, sales teams, distribution managers, professors, andstudents with a logical overview of the background, themethodology, and the particulars of managing customer relationshipsfor competitive advantage. Here, renowned customer relationshipmanagement pioneers Peppers and Rogers incorporate many of theprinciples of individualized customer relationships that they arebest known for, including a complete overview of the background andhistory of the subject, relationship theory, IDIC(Identify-Differentiate-Interact-Customize) methodology, metrics,data management, customer management, company organization, channelissues, and the store of the future. One of the first books designed to develop an understanding ofthe pedagogy of managing customer relationships, with an emphasison customer strategies and building customer value, ManagingCustomer Relationships features: Pioneering theories and principles of individualized customerrelationships

An overview of relationship theory Contributions from such revolutionary leaders as Philip Kotler,Esther Dyson, Geoffrey Moore, and Seth Godin Guidelines for identifying customers and differentiating them byvalue and need Tips for using the tools of interactivity and customization tobuild learning relationships Coverage of the importance of privacy and customer feedback Advice for measuring the success of customer-basedinitiatives The future and evolution of retailing An appendix that examines the qualities needed in a firm'scustomer relationship leaders, and that provides fundamental toolsfor embarking on a career in managing customer relationships orhelping a company use customer value as the basis for executivedecisions The techniques in Managing Customer Relationships can help anycompany sharpen its competitive advantage.

Big data: It's unstructured, it's coming at you fast, and there's lots of it. In fact, the majority of big data is text-oriented, thanks to the proliferation of online sources such as blogs, emails, and social media. However, having big data means little if you can't leverage it with analytics. Now you can explore the large volumes of unstructured text data that your organization has collected with Text Mining and Analysis: Practical Methods, Examples, and Case Studies Using SAS. This hands-on guide to text analytics using SAS provides detailed, step-by-step instructions and explanations on how to mine your text data for valuable insight. Through its comprehensive approach, you'll learn not just how to analyze your data, but how to collect, cleanse, organize, categorize, explore, and interpret it as well. Text Mining and Analysis also features an extensive set of case studies, so you can see examples of how the applications work with real-world data from a variety of industries. Text analytics enables you to gain insights about your customers' behaviors and sentiments. Leverage your organization's text data, and use those

insights for making better business decisions with Text Mining and Analysis. This book is part of the SAS Press program. Understanding the customer is critical to your company's success. In this instructive guide, Randy Collica employs SAS Enterprise Miner and the most commonly available techniques for customer relationship management (CRM). You will learn how to segment customers more intelligently and to achieve, or at least get closer to, the one-to-one customer relationship that today's businesses want. Step-by-step examples and exercises clearly illustrate the concepts of segmentation and clustering in the context of CRM. The book, with a foreword by Michael J. A. Berry, is sectioned into three parts. Part 1 reviews the basics of segmentation and clustering at an introductory level, providing examples from a variety of industries. Part 2 offers an in-depth treatment of segmentation with practical topics such as when and how to update your models and clustering with many attributes. Part 3 presents an introduction to newer, more advanced techniques, such as product affinity clustering, missing data imputation, and text mining segmentation. This straight-forward guide will appeal to anyone who seeks to better understand customers or prospective customers. Additionally, professors and students will find the book well suited for a business data mining analytics course in an MBA program or related course of study. You should understand basic statistics, but no prior knowledge of data mining or SAS Enterprise Miner is required. A foreword by Michael J. A. Berry is featured. Included on your bonus CD-ROM are the following: example SAS code, data sets, macros, and Enterprise Miner templates.
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. See how data science can answer the questions your business faces! Applying Data Science: Business Case Studies Using SAS, by Gerhard Svolba, shows you the benefits of analytics, how to gain more insight into your data, and how to make better decisions. In eight entertaining and real-world case studies, Svolba combines data science and advanced analytics with business questions, illustrating them with data and SAS code. The case studies range from a variety of fields, including performing headcount survival analysis for employee retention, forecasting the demand for new projects, using Monte Carlo simulation to understand outcome distribution, among other topics. The data science methods covered include Kaplan-Meier estimates, Cox Proportional Hazard Regression, ARIMA models, Poisson regression, imputation of missing values, variable clustering, and much more! Written for business analysts, statisticians, data miners, data scientists, and SAS programmers, Applying Data Science bridges the gap between high-level, business-focused books that skimp on the details and technical books that only show SAS code with no business context. The aim of this textbook (previously titled SAS for Data Analytics) is to teach the use of SAS for statistical analysis of

data for advanced undergraduate and graduate students in statistics, data science, and disciplines involving analyzing data. The book begins with an introduction beyond the basics of SAS, illustrated with non-trivial, real-world, worked examples. It proceeds to SAS programming and applications, SAS graphics, statistical analysis of regression models, analysis of variance models, analysis of variance with random and mixed effects models, and then takes the discussion beyond regression and analysis of variance to conclude. Pedagogically, the authors introduce theory and methodological basis topic by topic, present a problem as an application, followed by a SAS analysis of the data provided and a discussion of results. The text focuses on applied statistical problems and methods. Key features include: end of chapter exercises, downloadable SAS code and data sets, and advanced material suitable for a second course in applied statistics with every method explained using SAS analysis to illustrate a real-world problem. New to this edition: • Covers SAS v9.2 and incorporates new commands • Uses SAS ODS (output delivery system) for reproduction of tables and graphics output • Presents new commands needed to produce ODS output • All chapters rewritten for clarity • New and updated examples throughout • All SAS outputs are new and updated, including graphics • More exercises and problems • Completely new chapter on analysis of nonlinear and generalized linear models • Completely new appendix Mervyn G. Marasinghe, PhD, is Associate Professor Emeritus of Statistics at Iowa State University, where he has taught courses in statistical methods and statistical computing. Kenneth J. Koehler, PhD, is University Professor of Statistics at Iowa State University, where he teaches courses in statistical methodology at both graduate and undergraduate levels and primarily uses SAS to supplement his teaching.

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