Predictive Modeling With Sas Enterprise Miner Practical Solutions For Business Applications Second

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.
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.

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.

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. --

SAS Enterprise Miner 5.3 is the SAS data mining solution that addresses the entire data mining process using an intuitive Java point-and-click interface. This guide introduces you to the core functionality of SAS Enterprise Miner and shows you how to perform basic data mining tasks. You will learn how to use the graphical user interface (GUI) tools to create and manage process flow diagrams and projects, and to export mining results for reporting and integration with other SAS software. The data mining tasks you will learn include sampling, exploring, modifying, modeling, and assessing data in order to create and refine predictive models. Getting Started with Enterprise Miner 5.3 provides step-by-step examples that create a complete process flow diagram, including graphic results. This title is also available online and in hardcopy format. This title is intended for statisticians, quantitative analysts, and business technologists who want to learn to use the data mining capabilities of SAS Enterprise Miner.

Providing an in-depth explanation of the methodology and the theory behind each tool in SAS Enterprise Miner software, Dr. Sarma covers such topics as data collection, data cleaning, data exploration, logistic regression models, and more. The CD-ROM includes data sets and SAS code.

"This manual provides a general, practical introduction to data mining using SAS Enterprise Miner and SAS Text Miner software"--Pref.

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. 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.

This book provides a brief, easy-to-read guide to implementing hierarchical linear modelling using the three leading software platforms, followed by a set of application articles based on recent work published in leading journals and as part of doctoral dissertations. The "guide" portion consists of three chapters by the editor, covering basic to intermediate use of SPSS, SAS, and HLM for purposes for hierarchical linear modelling, while the "applications" portion consists of a dozen contributions in which the authors emphasize how-to and methodological aspects and show how they have used these techniques in practice.

Introduces the core functionality of SAS Enterprise Miner and shows how to perform basic data mining tasks. Provides step-by-step examples that create a

complete process-flow diagram including graphic results.

With the advent of electronic medical records years ago and the increasing capabilities of computers, our healthcare systems are sitting on growing mountains of data. Not only does the data grow from patient volume but the type of data we store is also growing exponentially. Practical Predictive Analytics and Decisioning Systems for Medicine provides research tools to analyze these large amounts of data and addresses some of the most pressing issues and challenges where data integrity is compromised: patient safety, patient communication, and patient information. Through the use of predictive analytic models and applications, this book is an invaluable resource to predict more accurate outcomes to help improve quality care in the healthcare and medical industries in the most cost–efficient manner. Practical Predictive Analytics and Decisioning Systems for Medicine provides the basics of predictive analytics for those new to the area and focuses on general philosophy and activities in the healthcare and medical system. It explains why predictive models are important, and how they can be applied to the predictive analysis process in order to solve real industry problems. Researchers need this valuable resource to improve data analysis skills and make more accurate and cost-effective decisions. Includes models and applications of predictive analytics why they are important and how

they can be used in healthcare and medical research Provides real world step-by-step tutorials to help beginners understand how the predictive analytic processes works and to successfully do the computations Demonstrates methods to help sort through data to make better observations and allow you to make better predictions

Data Preparation for Data Mining addresses an issue unfortunately ignored by most authorities on data mining: data preparation. Thanks largely to its perceived difficulty, data preparation has traditionally taken a backseat to the more alluring question of how best to extract meaningful knowledge. But without adequate preparation of your data, the return on the resources invested in mining is certain to be disappointing. Dorian Pyle corrects this imbalance. A twenty-five-year veteran of what has become the data mining industry, Pyle shares his own successful data preparation methodology, offering both a conceptual overview for managers and complete technical details for IT professionals. Apply his techniques and watch your mining efforts pay off-in the form of improved performance, reduced distortion, and more valuable results. On the enclosed CD-ROM, you'll find a suite of programs as C source code and compiled into a command-line-driven toolkit. This code illustrates how the author's techniques can be applied to arrive at an automated preparation solution that works for you.

Also included are demonstration versions of three commercial products that help with data preparation, along with sample data with which you can practice and experiment. * Offers in-depth coverage of an essential but largely ignored subject. * Goes far beyond theory, leading you-step by step-through the author's own data preparation techniques. * Provides practical illustrations of the author's methodology using realistic sample data sets. * Includes algorithms you can apply directly to your own project, along with instructions for understanding when automation is possible and when greater intervention is required. * Explains how to identify and correct data problems that may be present in your application. * Prepares miners, helping them head into preparation with a better understanding of data sets and their limitations.

The most thorough and up-to-date introduction to data mining techniques using SAS Enterprise Miner. The Sample, Explore, Modify, Model, and Assess (SEMMA) methodology of SAS Enterprise Miner is an extremely valuable analytical tool for making critical business and marketing decisions. Until now, there has been no single, authoritative book that explores every node relationship and pattern that is a part of the Enterprise Miner software with regard to SEMMA design and data mining analysis. Data Mining Using SAS Enterprise Miner introduces readers to a wide variety of data mining techniques and explains the

purpose of-and reasoning behind-every node that is a part of the Enterprise Miner software. Each chapter begins with a short introduction to the assortment of statistics that is generated from the various nodes in SAS Enterprise Miner v4.3, followed by detailed explanations of configuration settings that are located within each node. Features of the book include: The exploration of node relationships and patterns using data from an assortment of computations, charts, and graphs commonly used in SAS procedures A step-by-step approach to each node discussion, along with an assortment of illustrations that acquaint the reader with the SAS Enterprise Miner working environment Descriptive detail of the powerful Score node and associated SAS code, which showcases the important of managing, editing, executing, and creating custom-designed Score code for the benefit of fair and comprehensive business decision-making Complete coverage of the wide variety of statistical techniques that can be performed using the SEMMA nodes An accompanying Web site that provides downloadable Score code, training code, and data sets for further implementation, manipulation, and interpretation as well as SAS/IML software programming code This book is a well-crafted study guide on the various methods employed to randomly sample, partition, graph, transform, filter, impute, replace, cluster, and process data as well as interactively group and iteratively

process data while performing a wide variety of modeling techniques within the process flow of the SAS Enterprise Miner software. Data Mining Using SAS Enterprise Miner is suitable as a supplemental text for advanced undergraduate and graduate students of statistics and computer science and is also an invaluable, all-encompassing guide to data mining for novice statisticians and experts alike.

A comprehensive collection of the field's most provocative, influential new work Business Forecasting compiles some of the field's important and influential literature into a single, comprehensive reference for forecast modeling and process improvement. It is packed with provocative ideas from forecasting researchers and practitioners, on topics including accuracy metrics, benchmarking, modeling of problem data, and overcoming dysfunctional behaviors. Its coverage includes often-overlooked issues at the forefront of research, such as uncertainty, randomness, and forecastability, as well as emerging areas like data mining for forecasting. The articles present critical analysis of current practices and consideration of new ideas. With a mix of formal, rigorous pieces and brief introductory chapters, the book provides practitioners with a comprehensive examination of the current state of the business forecasting field. Forecasting performance is ultimately limited by the

'forecastability' of the data. Yet failing to recognize this, many organizations continue to squander resources pursuing unachievable levels of accuracy. This book provides a wealth of ideas for improving all aspects of the process, including the avoidance of wasted efforts that fail to improve (or even harm) forecast accuracy. Analyzes the most prominent issues in business forecasting Investigates emerging approaches and new methods of analysis Combines forecasts to improve accuracy Utilizes Forecast Value Added to identify process inefficiency The business environment is evolving, and forecasting methods must evolve alongside it. This compilation delivers an array of new tools and research that can enable more efficient processes and more accurate results. Business Forecasting provides an expert's-eye view of the field's latest developments to help you achieve your desired business outcomes.

Are you a data mining analyst, who spends up to 80% of your time assuring data quality, then preparing that data for developing and deploying predictive models? And do you find lots of literature on data mining theory and concepts, but when it comes to practical advice on developing good mining views find little "how to information? And are you, like most analysts, preparing the data in SAS? This book is intended to fill this gap as your source of practical recipes. It introduces a framework for the process of data preparation for data mining, and presents the

detailed implementation of each step in SAS. In addition, business applications of data mining modeling require you to deal with a large number of variables, typically hundreds if not thousands. Therefore, the book devotes several chapters to the methods of data transformation and variable selection. A complete framework for the data preparation process, including implementation details for each step. The complete SAS implementation code, which is readily usable by professional analysts and data miners. A unique and comprehensive approach for the treatment of missing values, optimal binning, and cardinality reduction. Assumes minimal proficiency in SAS and includes a quick-start chapter on writing SAS macros.

"Covers each phase of the development of a predictive analytics initiative. Through the use of case studies across a range of industries that include banking, megaresorts, mobile operators, healthcare, manufacturing, and retail, the book illustrates each phase of the predictive analytics cycle to create a playbook for future projects"--

SAS Visual Data Mining and Machine Learning, powered by SAS Viya, means that users of all skill levels can visually explore data on their own while drawing on powerful in-memory technologies for faster analytic computations and discoveries. You can manually program with custom code or use the features in SAS Studio, Model Studio, and SAS Visual Analytics to automate your data manipulation and modeling. These

programs offer a flexible, easy-to-use, self-service environment that can scale on an enterprise-wide level. In this book, we will explore some of the many features of SAS Visual Data Mining and Machine Learning including: programming in the Python interface; new, advanced data mining and machine learning procedures; pipeline building in Model Studio, and model building and comparison in SAS Visual Analytics. Over the last few decades, the growth of Business Intelligence has enabled companies to streamline many processes and expand into new markets on an unprecedented scale. New BI technologies are also enabling mass collaboration and innovation. However, implementation of these BI solutions often gives rise to new challenges. Business Intelligence Success Factors shows you how to turn those challenges into opportunities by mastering five key skills. Olivia Parr Rud shares insights gained from her two decades of experience in Business Intelligence to offer the latest practices that are emerging in organizational development. Written to help enhance your understanding of the current business climate and to provide the tools necessary to thrive in this new global economy, Business Intelligence Success Factors examines the components of chaos theory, complex adaptive systems, quantum physics, and evolutionary biology. A scientific framework for these new corporate issues helps explain why developing these key competencies are critical, given the speed of change, globalization, as well as advancements in technology and Business Intelligence. Divided into four cohesive parts, Business Intelligence Success Factors explores: The

current business landscape as well as the latest scientific research: today's business realities and how and why they can lead to chaos New scientific models for viewing the global economy The five essential competencies—Communication, Collaboration, Innovation, Adaptability, and Leadership—that improve an organization's ability to leverage the new opportunities in a volatile global economy Profiles of several amazing leaders who are working to make a difference Cutting-edge research and case studies via invited contributors offering a wealth of knowledge and experience Move beyond mere survival to realize breakaway success in the global economy with the practical guidance found in Business Intelligence Success Factors.

Learn the art and science of predictive analytics — techniques that get results Predictive analytics is what translates big data into meaningful, usable business information. Written by a leading expert in the field, this guide examines the science of the underlying algorithms as well as the principles and best practices that govern the art of predictive analytics. It clearly explains the theory behind predictive analytics, teaches the methods, principles, and techniques for conducting predictive analytics projects, and offers tips and tricks that are essential for successful predictive modeling. Hands-on examples and case studies are included. The ability to successfully apply predictive analytics enables businesses to effectively interpret big data; essential for competition today This guide teaches not only the principles of predictive analytics, but also how to apply them to achieve real, pragmatic solutions Explains methods, principles, and

techniques for conducting predictive analytics projects from start to finish Illustrates each technique with hands-on examples and includes as series of in-depth case studies that apply predictive analytics to common business scenarios A companion website provides all the data sets used to generate the examples as well as a free trial version of software Applied Predictive Analytics arms data and business analysts and business managers with the tools they need to interpret and capitalize on big data. 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

A supplement such as Using SAS for Econometrics is quite essential for use in a classroom environment, for those attempting to learn SAS, and for quick and useful reference. The SAS documentation comes in many volumes, and several are thousands of pages long. This makes for a very difficult challenge when getting started with SAS. This volume spans several levels of econometrics. It is suitable for undergraduate students who will use "canned" SAS statistical procedures, and for graduate students who will use advanced procedures as well as direct programming in SAS's matrix language, discussed in chapter appendices. Material within the chapters is accessible to undergraduate and/or Masters students, with appendices to chapters

devoted to more advanced materials and matrix programming.
Learn the theory behind and methods for predictive modeling using SAS Enterprise
Miner. Learn how to produce predictive models and prepare presentation-quality
graphics in record time with Predictive Modeling with SAS Enterprise Miner: Practical
Solutions for Business Applications, Second Edition. If you are a graduate student,
researcher, or statistician interested in predictive modeling; a data mining expert who
wants to learn SAS Enterprise Miner; or a business analyst looking for an introduction
to predictive modeling using SAS Enterprise Miner, you'll be able to develop predictive
models quickly and effectively using the theory and examples presented in this book.
Author Kattamuri Sarma offers the theory behind, programming steps for, and
examples of predictive modeling with SAS Enterprise Miner, along with exercises at the
end of each chapter. You'll gain a comprehensive awareness of how to find solutions
for your business needs. This second edition features expanded coverage of the SAS
Enterprise Miner nodes, now including File Import, Time Series, Variable Clustering,
Cluster, Interactive Binning, Principal Components, AutoNeural, DMNeural, Dmine
Regression, Gradient Boosting, Ensemble, and Text Mining. Develop predictive models
quickly, learn how to test numerous models and compare the results, gain an in-depth
understanding of predictive models and multivariate methods, and discover how to do
in-depth analysis. Do it all with Predictive Modeling with SAS Enterprise Miner. This
book is part of the SAS Press program.

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.

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.

Analytics offers many capabilities and options to measure and improve data quality, and SAS is perfectly suited to these tasks. Gerhard Svolba's Data Quality for Analytics Using SAS focuses on selecting the right data sources and ensuring data quantity, relevancy, and completeness. The book is made up of three parts. The first part, which is conceptual, defines data quality and contains text, definitions, explanations, and examples. The second part shows how the data quality status can be profiled and the ways that data quality can be improved with analytical methods. The final part details the consequences of poor data quality for predictive modeling and time series forecasting.

Combine complex concepts facing the financial sector with the software toolsets available to analysts. The credit decisions you make are dependent on the data, models, and tools that you

use to determine them. Developing Credit Risk Models Using SAS Enterprise Miner and SAS/STAT: Theory and Applications combines both theoretical explanation and practical applications to define as well as demonstrate how you can build credit risk models using SAS Enterprise Miner and SAS/STAT and apply them into practice. The ultimate goal of credit risk is to reduce losses through better and more reliable credit decisions that can be developed and deployed quickly. In this example-driven book, Dr. Brown breaks down the required modeling steps and details how this would be achieved through the implementation of SAS Enterprise Miner and SAS/STAT. Users will solve real-world risk problems as well as comprehensively walk through model development while addressing key concepts in credit risk modeling. The book is aimed at credit risk analysts in retail banking, but its applications apply to risk modeling outside of the retail banking sphere. Those who would benefit from this book include credit risk analysts and managers alike, as well as analysts working in fraud, Basel compliancy, and marketing analytics. It is targeted for intermediate users with a specific business focus and some programming background is required. Efficient and effective management of the entire credit risk model lifecycle process enables you to make better credit decisions. Developing Credit Risk Models Using SAS Enterprise Miner and SAS/STAT: Theory and Applications demonstrates how practitioners can more accurately develop credit risk models as well as implement them in a timely fashion.

« 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. »--
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 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. Text addresses such tasks as: 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, and using SAS procedures for scoring. 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.
Predictive Modeling with SAS Enterprise MinerPractical Solutions for Business Applications, Third EditionSAS Institute
To use statistical methods and SAS applications to forecast the future values of data taken over time, you need only follow this thoroughly updated classic on the subject. With this third edition of SAS for Forecasting Time Series, intermediate-to-advanced

SAS users—such as statisticians, economists, and data scientists—can now match the most sophisticated forecasting methods to the most current SAS applications. Starting with fundamentals, this new edition presents methods for modeling both univariate and multivariate data taken over time. From the well-known ARIMA models to unobserved components, methods that span the range from simple to complex are discussed and illustrated. Many of the newer methods are variations on the basic ARIMA structures. Completely updated, this new edition includes fresh, interesting business situations and data sets, and new sections on these up-to-date statistical methods: ARIMA models Vector autoregressive models Exponential smoothing models Unobserved component and state-space models Seasonal adjustment Spectral analysis Focusing on application, this guide teaches a wide range of forecasting techniques by example. The examples provide the statistical underpinnings necessary to put the methods into practice. The following up-to-date SAS applications are covered in this edition: The ARIMA procedure The AUTOREG procedure The VARMAX procedure The ESM procedure The UCM and SSM procedures The X13 procedure The SPECTRA procedure SAS Forecast Studio Each SAS application is presented with explanation of its strengths, weaknesses, and best uses. Even users of automated forecasting systems will benefit from this knowledge of what is done and why. Moreover, the accompanying examples can serve as templates that you easily adjust to fit your specific forecasting needs. This book is part of the SAS Press program.

This book is written for students in higher education. Instructors teaching predictive analytics courses can assign this book to their students to expose them to predictive analytics techniques using SAS Enterprise Miner. The book is developed using SAS Enterprise Miner 14.3, but it should apply to other versions with little to no changes. This book does not require students to have any previous knowledge of SAS Enterprise Miner. It walks students through the predictive analytics process using step-by-step by instructions. Even though the contents of this book can be completed by anyone who has access to SAS Enterprise Miner, knowledge of predictive analytics concepts is essential. Also, this book is not a substitute for any lecture or textbook. It is best if this book is used in parallel to lectures.

Written for students in undergraduate and graduate statistics courses, as well as for the practitioner who wants to make better decisions from data and models, this updated and expanded second edition of Fundamentals of Predictive Analytics with JMP(R) bridges the gap between courses on basic statistics, which focus on univariate and bivariate analysis, and courses on data mining and predictive analytics. Going beyond the theoretical foundation, this book gives you the technical knowledge and problem-solving skills that you need to perform real-world multivariate data analysis. First, this book teaches you to recognize when it is appropriate to use a tool, what variables and data are required, and what the results might be. Second, it teaches you how to interpret the results and then, step-by-step, how and where to perform and evaluate the

analysis in JMP . Using JMP 13 and JMP 13 Pro, this book offers the following new and enhanced features in an example-driven format: an add-in for Microsoft Excel Graph Builder dirty data visualization regression ANOVA logistic regression principal component analysis LASSO elastic net cluster analysis decision trees k-nearest neighbors neural networks bootstrap forests boosted trees text mining association rules model comparison With today's emphasis on business intelligence, business analytics, and predictive analytics, this second edition is invaluable to anyone who needs to expand his or her knowledge of statistics and to apply real-world, problem-solving analysis. This book is part of the SAS Press program.

The quest for quality in healthcare has led to attempts to develop models to determine which providers have the highest quality in healthcare, with the best outcomes for patients. Text Mining Techniques for Healthcare Provider Quality Determination: Methods for Rank Comparisons discusses the general practice of defining a patient severity index in order to make risk adjustments to compare patient outcomes across multiple providers with the intent of ranking the providers in terms of quality. This innovative reference source, valuable to medical practitioners, researchers, and academicians, brings together research from across the globe focusing on how severity indices are generally defined when determining the best outcome for patient 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.

Collecting, analyzing, and extracting valuable information froma large amount of data requires easily accessible, robust,computational and analytical tools. Data Mining and BusinessAnalytics with R utilizes the open source software R for theanalysis, exploration, and simplification of large high-dimensionaldata sets. As a result, readers are provided with the neededguidance to model and interpret complicated data and

become adeptat building powerful models for prediction and classification. Highlighting both underlying concepts and practicalcomputational skills, Data Mining and Business Analytics withR begins with coverage of standard linear regression and theimportance of parsimony in statistical modeling. The book includesimportant topics such as penalty-based variable selection (LASSO);logistic regression; regression and classification trees;clustering; principal components and partial least squares; and theanalysis of text and network data. In addition, the bookpresents: • A thorough discussion and extensive demonstration of thetheory behind the most useful data mining tools • Illustrations of how to use the outlined concepts inreal-world situations • Readily available additional data sets and related Rcode allowing readers to apply their own analyses to the discussedmaterials • Numerous exercises to help readers with computing skillsand deepen their understanding of the material Data Mining and Business Analytics with R is an excellentgraduate-level textbook for courses on data mining and businessanalytics. The book is also a valuable reference for practitionerswho collect and analyze data in the fields of finance, operationsmanagement, marketing, and the information sciences.