DESCRIPTION

A hands-on guide to making valuable decisions from data using advanced data mining methods and techniques

This second installment in the Making Sense of Data series continues to explore a diverse range of commonly used approaches to making and communicating decisions from data. Delving into more technical topics, this book equips readers with advanced data mining methods that are needed to successfully translate raw data into smart decisions across various fields of research including business, engineering, finance, and the social sciences.

Following a comprehensive introduction that details how to define a problem, perform an analysis, and deploy the results, Making Sense of Data II addresses the following key techniques for advanced data analysis:

• **Data Visualization** reviews principles and methods for understanding and communicating data through the use of visualization including single variables, the relationship between two or more variables, groupings in data, and dynamic approaches to interacting with data through graphical user interfaces.
**Clustering** outlines common approaches to clustering data sets and provides detailed explanations of methods for determining the distance between observations and procedures for clustering observations. Agglomerative hierarchical clustering, partitioned-based clustering, and fuzzy clustering are also discussed.

**Predictive Analytics** presents a discussion on how to build and assess models, along with a series of predictive analytics that can be used in a variety of situations including principal component analysis, multiple linear regression, discriminate analysis, logistic regression, and Naïve Bayes.

**Applications** demonstrates the current uses of data mining across a wide range of industries and features case studies that illustrate the related applications in real-world scenarios.

Each method is discussed within the context of a data mining process including defining the problem and deploying the results, and readers are provided with guidance on when and how each method should be used. The related Web site for the series (www.makingsenseofdata.com) provides a hands-on data analysis and data mining experience. Readers wishing to gain more practical experience will benefit from the tutorial section of the book in conjunction with the Traceis TM software, which is freely available online.

With its comprehensive collection of advanced data mining methods coupled with tutorials for applications in a range of fields, *Making Sense of Data II* is an indispensable book for courses on data analysis and data mining at the upper-undergraduate and graduate levels. It also serves as a valuable reference for researchers and professionals who are interested in learning how to accomplish effective decision making from data and understanding if data analysis and data mining methods could help their organization.

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**ABOUT THE AUTHOR**

**Glenn J. Myatt, PhD,** is cofounder of Leadscope, Inc. and a Partner of Myatt & Johnson, Inc., a consulting company that focuses on business intelligence application development delivered through the Internet. Dr. Myatt is the author of *Making Sense of Data: A Practical Guide to Exploratory Data Analysis and Data Mining,* also published by Wiley. **WAYNE P. JOHNSON, MSc.,** is cofounder of Leadscope, Inc. and a Partner of Myatt & Johnson, Inc. Mr. Johnson has over two decades of experience in the design and development of large software systems, and his current professional interests include human–computer interaction, information visualization, and methodologies for contextual inquiry.
FEATURES

• When compared to Dr. Myatt's first book in this series, this new book explores additional and more advanced data mining methods, and it also describes the application of data mining to areas such as the mining of textual and business data.

• This book provides a general end-to-end discussion concerning the process of translating raw data to scientific and business decisions.

• The reader's ability to find patterns in data will be greatly enhanced due to the book's combination of statistical learning with powerful visualization techniques.

• The book provides a wide variety of modern statistical learning techniques for extracting information from large data sets.

• A related website (www.makingsenseofdata.com) provides a hands-on data analysis and data mining experience. Readers wishing to gain more practical experience will benefit from the tutorial section of the book in conjunction with the free Traceis TM software available online.

For additional product details, please visit https://www.wiley.com/en-us