DESCRIPTION

This book reviews state-of-the-art methodologies and techniques for analyzing enormous quantities of raw data in high-dimensional data spaces, to extract new information for decision making. The goal of this book is to provide a single introductory source, organized in a systematic way, in which we could direct the readers in analysis of large data sets, through the explanation of basic concepts, models and methodologies developed in recent decades.

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ABOUT THE AUTHOR

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NEW TO EDITION

Data Mining methodologies have been evolving over time. New edition includes following new techniques/methodologies

• Support Vector Machines (SVM) – one of the new methodologies, developed based on statistical learning theory, showed large potential for applications in predictive data mining

• Kohonen Maps (Self-organizing Maps –SOM) – one of very applicative neural networks based methodologies for descriptive data mining and multi-dimensional data visualizations

• DBSCAN clustering algorithm – as a representative of an important class of density-based clustering methodologies

• Temporal and Spatial Data Mining – including streaming data analyses is an important trend in data mining recognizing value of time and space information in real world applications

• Web and Text Mining

• Parallel and Distributed Data Mining

• Updates on the older techniques presented in the first edition

FEATURES

• Discusses data mining principles and describes representative state-of-the-art methods and algorithms originating from different disciplines such as statistics, data bases, pattern recognition, machine learning, neural networks, fuzzy logic, and evolutionary computation

• Detailed algorithms are given with necessary explanations, illustrative examples, and questions and exercises for practice at the end of each chapter

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