

FOREWORD

As the information revolution replaced the industrial age an avalanche of massive data sets has spread all over the activities of engineering, science, medicine, finance, and other human endeavors. This book offers a nice pathway to the exploration of massive data sets.

The process of working with these massive data sets of information to extract useful knowledge (if such knowledge exists) is called knowledge discovery. Data mining is an important part of knowledge discovery in data sets. Knowledge discovery does not start and does not end with the data mining techniques. It also involves a clear understanding of the proposed applications, the creation of a target data set, removal or correction of corrupted data, data reduction, and needs an expert in the application field in order to decide if the patterns obtained by data mining are meaningful. The interpretation of the discovered patterns and the verification of their accuracy may also involve experts from different areas including visualization, image analysis and computer graphics.

The book *Data Mining and Knowledge Discovery Approaches Based on Rule Induction Techniques* edited by Evangelos Triantaphyllou and Giovanni Felici is comprised of chapters written by experts in a wide spectrum of theories and applications. The field of knowledge discovery in data sets is highly interdisciplinary, and the editors have made an outstanding job in bringing together researchers from many diverse areas to contribute to this volume. The book's coverage and presentation of topics is outstanding. It can be used as complimentary material for a graduate course in data mining and related fields. I have found the contents of the book refreshing and consistently very well written.

The last couple of decades have witnessed an awesome development of novel mathematical and algorithmic theories focusing on knowledge discovery. What is remarkable about these theories is their unified effects in real-world applications. Books that capture these exciting interdisciplinary activities in data mining and knowledge discovery in an efficient way are extremely important for the education and training of the next generation of researchers. The present book has exactly done that.

It gives me a particular pleasure to welcome this edited volume into this series and to recommend it enthusiastically to all researchers, educators,

students, and practitioners interested in recent developments in data mining and knowledge discovery.

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