

Lecture Notes in Artificial Intelligence 1574

Subseries of Lecture Notes in Computer Science

Ning Zhong Lizhu Zhou (Eds.)

Methodologies for Knowledge Discovery and Data Mining

Third Pacific-Asia Conference, PAKDD-99
Beijing, China, April 1999
Proceedings



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Volume Editors

Ning Zhong
Yamaguchi University
Department of Computer Science and Systems Engineering
Tokiwa-Dai, 2557, Ube 755, Japan
E-mail: zhong@ai.csse.yamaguchi-u.ac.jp

Lizhu Zhou
Tsinghua University
Department of Computer Science and Technology
Beijing, China
E-mail: dcszlz@mail.tsinghua.edu.cn

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Preface

This volume contains the papers selected for presentation at the Third Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD-99) held in the Xiangshan Hotel, Beijing, China, April 26-28, 1999. The conference was sponsored by Tsinghua University, National Science Foundation of China, Chinese Computer Federation, Toshiba Corporation, and NEC Software Chugoku, Ltd. PAKDD-99 provided an international forum for the sharing of original research results and practical development experiences among researchers and application developers from different KDD-related areas such as machine learning, databases, statistics, knowledge acquisition, data visualization, knowledge-based systems, soft computing, and high performance computing. It followed the success of PAKDD-97 held in Singapore in 1997 and PAKDD-98 held in Australia in 1998 by bringing together participants from universities, industry, and government.

PAKDD-99 encouraged both new theory/methodologies and real world applications, and covered broad and diverse topics in data mining and knowledge discovery. The technical sessions included: Association Rules Mining; Feature Selection and Generation; Mining in Semi, Un-structured Data; Interestingness, Surprisingness, and Exceptions; Rough Sets, Fuzzy Logic, and Neural Networks; Induction, Classification, and Clustering; Causal Model and Graph-Based Methods; Visualization; Agent-Based, and Distributed Data Mining; Advanced Topics and New Methodologies.

Of the 158 submissions, we accepted 29 regular papers and 37 short papers for presentation at the conference and for publication in this volume. In addition, over 20 papers were accepted for poster presentation.

The PAKDD-99 program was further supplemented by two invited speakers: Won Kim and Hiroshi Motoda, a special session on Emerging KDD Technology (Speakers: Zdzislaw Pawlak, Philip Yu, T.Y. Lin, Hiroshi Tsukimoto), and a panel session on Knowledge Management in Data Mining (Chair: Xindong Wu; Panelists: Rao Kotagiri, Zhongzhi Shi, Jan M. Żytkow).

Two tutorials: Automated Discovery - Combining AI, Statistics and Theory of Knowledge by Jan M. Żytkow, Quality Data and Effective Mining by Hongjun Lu, and a workshop on Knowledge Discovery from Advanced Databases organized by Mohamed Quafafou and Philip Yu, were also offered to all conference participants on April 26.

A conference such as this can only succeed as a team effort. We would like to acknowledge the contribution of the program committee members and thank the reviewers for their reviewing efforts, the PAKDD steering committee members for their invaluable input and advice, and the conference chairs: Bo Zhang and Setsuo Ohsuga whose involvement and support have added greatly to the quality of the conference. Our sincere gratitude goes to all of the authors who submitted papers. We are grateful to our sponsors for their generous support. Special thanks are due to Alfred Hofmann of Springer-Verlag for his help and cooperation.

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Contents

Invited Talks

KDD as an Enterprise IT Tool: Reality and Agenda	1
<i>W. Kim</i>	
Computer Assisted Discovery of First Principle Equations from Numeric Data	2
<i>H. Motoda</i>	

Emerging KDD Technology

Data Mining: A Rough Set Perspective	3
<i>Z. Pawlak</i>	
Data Mining Techniques for Associations, Clustering and Classification	13
<i>C. C. Aggarwal, P. S. Yu</i>	
Data Mining: Granular Computing Approach	24
<i>T. Y. Lin</i>	
Rule Extraction from Prediction Models	34
<i>H. Tsukimoto</i>	

Association Rules

Mining Association Rules on Related Numeric Attributes	44
<i>X. Du, Z. Liu, N. Ishii</i>	
LGen - A Lattice-Based Candidate Set Generation Algorithm for I/O Efficient Association Rule Mining	54
<i>C. L. Yip, K. K. Loo, B. Kao, D. W. Cheung, C. K. Cheng</i>	
Extending the Applicability of Association Rules	64
<i>K. Rajamani, S. Sung, A. Cox</i>	
An Efficient Approach for Incremental Association Rule Mining	74
<i>P. S. M. Tsai, C.-C. Lee, A. L. P. Chen</i>	

Association Rules in Incomplete Databases	84
<i>M. Kryszkiewicz</i>	
Parallel SQL Based Association Rule Mining on Large Scale PC Cluster: Performance Comparison with Directly Coded C Implementation	94
<i>I. Pramudiono, T. Shintani, T. Tamura, M. Kitsuregawa</i>	
H-Rule Mining in Heterogeneous Databases	99
<i>Y. Yang, M. Singhal</i>	
An Improved Definition of Multidimensional, Inter-transaction Association Rule	104
<i>A. Zhou, S. Zhou, W. Jin, Z. Tian</i>	
Incremental Discovering Association Rules: A Concept Lattice Approach	109
<i>K. Hu, Y. Lu, C. Shi</i>	

Feature Selection and Generation

Induction as Pre-processing <i>X. Wu</i>	114
Stochastic Attribute Selection Committees with Multiple Boosting: Learning More Accurate and More Stable Classifier Committees	123
<i>Z. Zheng, G. I. Webb</i>	
On Information-Theoretic Measures of Attribute Importance	133
<i>Y. Y. Yao, S. K. M. Wong, C. J. Butz</i>	
A Technique of Dynamic Feature Selection Using the Feature Group Mutual Information	138
<i>K.-C. Lee</i>	
A Data Pre-processing Method Using Association Rules of Attributes for Improving Decision Tree	143
<i>M. Terabe, O. Katai, T. Sawaragi, T. Washio, H. Motoda</i>	

Mining in Semi, Un-structured Data

An Algorithm for Constrained Association Rule Mining in Semi-structured Data	148
<i>L. Singh, B. Chen, R. Haight, P. Scheuermann</i>	

Incremental Mining of Schema for Semi-structured Data	159
<i>A. Zhou, W. Jin, S. Zhou, Z. Tian</i>	
Discovering Structure from Document Databases	169
<i>M.-F. Jiang, S.-S. Tseng, C.-J. Tsai</i>	
Combining Forecasts from Multiple Textual Data Sources	174
<i>V. Cho, B. Wüthrich</i>	
Domain Knowledge Extracting in a Chinese Natural Language Interface to Databases: NChiq1	179
<i>X. Meng, Y. Zhou, S. Wang</i>	

Interestingness, Surprisingness, and Exceptions

Evolutionary Hot Spots Data Mining: An Architecture for Exploring for Interesting Discoveries	184
<i>G. J. Williams</i>	
Efficient Search of Reliable Exceptions	194
<i>H. Liu, H. Lu, L. Feng, F. Hussain</i>	
Heuristics for Ranking the Interestingness of Discovered Knowledge	204
<i>R. J. Hilderman, H. J. Hamilton</i>	

Rough Sets, Fuzzy Logic, and Neural Networks

Automated Discovery of Plausible Rules Based on Rough Sets and Rough Inclusion	210
<i>S. Tsumoto</i>	
Discernibility System in Rough Sets	220
<i>Z. Liu, Z. Xie</i>	
Automatic Labeling of Self-Organizing Maps: Making a Treasure-Map Reveal Its Secrets	228
<i>A. Rauber, D. Merkl</i>	
Neural Network Based Classifiers for a Vast Amount of Data	238
<i>L. Zhang, B. Zhang</i>	

Accuracy Tuning on Combinatorial Neural Model	247
<i>H. A. Prado, K. F. Machado, S. R. Frigeri, P. M. Engel</i>	
A Situated Information Articulation Neural Network: VSF Network	252
<i>Y. Kakemoto, S. Nakasuka</i>	
Neural Method for Detection of Complex Patterns in Databases	258
<i>C. Deng, F. Xiong</i>	
Preserve Discovered Linguistic Patterns Valid in Volatility Data Environment	263
<i>X. Shi, M.-C. Chan, D. Li</i>	
An Induction Algorithm Based on Fuzzy Logic Programming	268
<i>D. Shibata, N. Inuzuka, S. Kato, T. Matsui, H. Itoh</i>	
Rule Discovery in Databases with Missing Values Based on Rough Set Model	274
<i>S. Tsumoto</i>	
Sustainability Knowledge Mining from Human Development Database ...	279
<i>X. Wang, R. Wang, J. Wang</i>	

Induction, Classification, and Clustering

Characterization of Default Knowledge in Ripple Down Rules Method	284
<i>T. Wada, T. Horiuchi, H. Motoda, T. Washio</i>	
Improving the Performance of Boosting for Naive Bayesian Classification	296
<i>K. M. Ting, Z. Zheng</i>	
Convex Hulls in Concept Induction	306
<i>D. A. Newlands, G. I. Webb</i>	
Mining Classification Knowledge Based on Cloud Models	317
<i>J. Fan, D. Li</i>	
Robust Clustering of Large Geo-referenced Data Sets	327
<i>V. Estivill-Castro, M. E. Houle</i>	
A Fast Algorithm for Density-Based Clustering in Large Database	338
<i>B. Zhou, D. W. Cheung, B. Kao</i>	

A Lazy Model-Based Algorithm for On-Line Classification	350
<i>G. Melli</i>	
An Efficient Space-Partitioning Based Algorithm for the K-Means Clustering	355
<i>K. AlSabti, S. Ranka, V. Singh</i>	
A Fast Clustering Process for Outliers and Remainder Clusters	360
<i>C.-M. Su, S.-S. Tseng, M.-F. Jiang, J. C. S. Chen</i>	
Optimising the Distance Metric in the Nearest Neighbour Algorithm on a Real-World Patient Classification Problem	365
<i>H. He, S. Hawkins</i>	
Classifying Unseen Cases with Many Missing Values	370
<i>Z. Zheng, B. T. Low</i>	
Study of a Mixed Similarity Measure for Classification and Clustering	375
<i>T. B. Ho, N. B. Nguyen, T. Morita</i>	

Visualization

Visually Aided Exploration of Interesting Association Rules	380
<i>B. Liu, W. Hsu, K. Wang, S. Chen</i>	
DVIZ: A System for Visualizing Data Mining	390
<i>J. Han, N. Cercone</i>	

Causal Model and Graph-Based Methods

A Minimal Causal Model Learner	400
<i>H. Dai</i>	
Efficient Graph-Based Algorithm for Discovering and Maintaining Knowledge in Large Databases	409
<i>K. L. Lee, G. Lee, A. L. P. Chen</i>	
Basket Analysis for Graph Structured Data	420
<i>A. Inokuchi, T. Washio, H. Motoda, K. Kumasawa, N. Arai</i>	

The Evolution of Causal Models: A Comparison of Bayesian Metrics and Structure Priors	432
<i>J. R. Neil, K. B. Korb</i>	

KD-FGS: A Knowledge Discovery System from Graph Data Using Formal Graph System	438
<i>T. Miyahara, T. Uchida, T. Kuboyama, T. Yamamoto, K. Takahashi, H. Ueda</i>	

Agent-Based, and Distributed Data Mining

Probing Knowledge in Distributed Data Mining	443
<i>Y. Guo, J. Sutiwaraphun</i>	

Discovery of Equations and the Shared Operational Semantics in Distributed Autonomous Databases	453
<i>Z. W. Raś, J. M. Żytkow</i>	

The Data-Mining and the Technology of Agents to Fight the Illicit Electronic Messages	464
<i>A. Zighed, M. Côté, N. Troudi</i>	

Knowledge Discovery in SportsFinder: An Agent to Extract Sports Results from the Web	469
<i>H. Lu, L. Sterling, A. Wyatt</i>	

Event Mining with Event Processing Networks	474
<i>L. Perrochon, W. Mann, S. Kasriel, D. C. Luckham</i>	

Advanced Topics and New Methodologies

An Analysis of Quantitative Measures Associated with Rules	479
<i>Y. Y. Yao, N. Zhong</i>	

A Strong Relevant Logic Model of Epistemic Processes in Scientific Discovery	489
<i>J. Cheng</i>	

Discovering Conceptual Differences among Different People via Diverse Structures	494
<i>T. Yoshida, T. Kondo, S. Nishida</i>	

Ordered Estimation of Missing Values	499
<i>O. O. Lobo, M. Numao</i>	