Yahiko Kambayashi Mukesh Mo..... Wolfram Wöß (Eds.)



Data Warehousing and Knowledge Discovery

6th International Conference, DaWaK 2004 Zaragoza, Spain, September 1-3, 2004 Proceedings



Table of Contents

Data Warehousing Design	
Conceptual Design of XML Document Warehouses	1
Bringing Together Partitioning, Materialized Views and Indexes to Optimize Performance of Relational Data Warehouses	15
GeoDWFrame: A Framework for Guiding the Design of Geographical Dimensional Schemas	26
Workload-Based Placement and Join Processing in Node-Partitioned Data Warehouses	38
Knowledge Discovery Framework and XML Data Minig	
Novelty Framework for Knowledge Discovery in Databases	48
Revisiting Generic Bases of Association Rules	58
Mining Maximal Frequently Changing Subtree Patterns from XML Documents	68
Discovering Pattern-Based Dynamic Structures from Versions of Unordered XML Documents	77
Data Cubes and Queries	
Space-Efficient Range-Sum Queries in OLAP	87
Answering Approximate Range Aggregate Queries on OLAP Data Cubes with Probabilistic Guarantees	97

Computing Complex Iceberg Cubes by Multiway Aggregation and Bounding
Multidimensional Schema and Data Aggregation
An Aggregate-Aware Retargeting Algorithm for Multiple Fact Data Warehouses
A Partial Pre-aggregation Scheme for HOLAP Engines
Discovering Multidimensional Structure in Relational Data
Inductive Databases and Temporal Rules
Inductive Databases as Ranking
Inductive Databases of Polynomial Equations
From Temporal Rules to Temporal Meta-rules
Industrial Track
How Is BI Used in Industry?: Report from a Knowledge Exchange Network
Towards an Adaptive Approach for Mining Data Streams in Resource Constrained Environments
Data Clustering
Exploring Possible Adverse Drug Reactions by Clustering Event Sequences
SCLOPE: An Algorithm for Clustering Data Streams of Categorical Attributes

Novel Clustering Approach that Employs Genetic Algorithm with New Representation Scheme and Multiple Objectives
Data Visualization and Exploration
Categorical Data Visualization and Clustering Using Subjective Factors 229 Chia-Hui Chang and Zhi-Kai Ding
Multidimensional Data Visual Exploration by Interactive Information Segments
Metadata to Support Transformations and Data & Metadata Lineage in a Warehousing Environment
Data Classification, Extraction and Interpretation
Classification Based on Attribute Dependency
OWDEAH: Online Web Data Extraction Based on Access History 269 Zhao Li, Wee-Keong Ng, and Kok-Leong Ong
Data Mining Approaches to Diffuse Large B–Cell Lymphoma Gene Expression Data Interpretation
Data Semantics
Deriving Multiple Topics to Label Small Document Regions
Deriving Efficient SQL Sequences via Read-Aheads
Diversity in Random Subspacing Ensembles
Association Rule Mining
Partitioned Approach to Association Rule Mining over Multiple Databases

XIV Table of Contents

A Tree Partitioning Method for Memory Management in Association Rule Mining
Mining Interesting Association Rules for Prediction in the Software Project Management Area
Mining Event Sequences
PROWL: An Efficient Frequent Continuity Mining Algorithm on Event Sequences
Algorithms for Discovery of Frequent Superset, Rather than Frequent Subset
Improving Direct Counting for Frequent Itemset Mining
Pattern Mining
Mining Sequential Patterns with Item Constraints
Mining Borders of the Difference of Two Datacubes
Mining Periodic Patterns in Sequence Data
Author Index411