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Nota di contenuto	Concept Data Analysis; Contents; Foreword; Preface; I Theory and Algorithms; 1 Theoretical Foundations; 1.1 Basic Notions of Orders and Lattices; 1.2 Context, Concept, and Concept Lattice; 1.3 Many-valued Contexts; 1.4 Bibliographic Notes; 2 Algorithms; 2.1 Constructing Concept Lattices; 2.1.1 Computational space complexity of concept lattices; 2.1.2 Construction of the set of concepts; 2.1.3 Construction of concept lattices; 2.1.4 Construction of partial concept lattices; 2.2 Incremental Lattice Update; 2.2.1 Incremental construction of concept lattices; 2.2.2 Updating the context 2.2.3 Summary of lattice construction2.3 Visualization; 2.3.1 Hierarchical folders; 2.3.2 Nested line diagrams; 2.3.3 Focus+context views; 2.4 Adding Knowledge to Concept Lattices; 2.4.1 Adding background knowledge to object description; 2.4.2 Pruning concepts with user constraints; 2.5 Bibliographic Notes; II Applications; 3 Information Retrieval; 3.1 Query Modification; 3.1.1 Navigating around the query concept; 3.1.2 Thesaurus-enhanced navigation and querying; 3.1.3 Automatic generation of index terms; 3.2 Document Ranking;

3.2.1 The vocabulary problem; 3.2.2 Concept lattice-based ranking
3.2.3 Scalability3.3 Bibliographic Notes; 4 Text Mining; 4.1 Mining the Content of the ACM Digital Library; 4.1.1 The ACM Digital Library; 4.1.2 Information retrieval and data view versus text mining; 4.1.3 Constructing the TOIS concept lattice; 4.1.4 Interacting with the TOIS concept lattice; 4.2 Mining Web Retrieval Results with CREDO; 4.2.1 Visualizing Web retrieval results; 4.2.2 Design and implementation of CREDO; 4.2.3 Example sessions; 4.3 Bibliographic Notes; 5 Rule Mining; 5.1 Implications; 5.1.1 Computational space complexity of implications
5.1.2 Generating implications from the concept lattice5.2 Functional Dependencies; 5.2.1 Functional dependencies as implications of transformed contexts; 5.2.2 Computational space complexity of the concept lattice of transformed contexts; 5.3 Association Rules; 5.3.1 Mining frequent concepts; 5.3.2 Generating confident rules from frequent concepts; 5.4 Classification Rules; 5.5 Bibliographic Notes; References; Index

Sommario/riassunto

With the advent of the Web along with the unprecedented amount of information available in electronic format, conceptual data analysis is more useful and practical than ever, because this technology addresses important limitations of the systems that currently support users in their quest for information. Concept Data Analysis: Theory & Applications is the first book that provides a comprehensive treatment of the full range of algorithms available for conceptual data analysis, spanning creation, maintenance, display and manipulation of concept lattices. The accompanying website allows