

1. Record Nr.	UNINA9911020006703321
Titolo	Mining graph data // edited by Diane J. Cook, Lawrence B. Holder
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2007
ISBN	9786610740208 9781280740206 1280740205 9780470073049 0470073047 9780470073032 0470073039
Descrizione fisica	1 online resource (501 p.)
Altri autori (Persone)	CookDiane J. <1963-> HolderLawrence B. <1964->
Disciplina	005.74
Soggetti	Data mining Data structures (Computer science) Graphic methods
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	MINING GRAPH DATA; CONTENTS; Preface; Acknowledgments; Contributors; 1 INTRODUCTION; 1.1 Terminology; 1.2 Graph Databases; 1.3 Book Overview; References; Part I GRAPHS; 2 GRAPH MATCHING-EXACT AND ERROR-TOLERANT METHODS AND THE AUTOMATIC LEARNING OF EDIT COSTS; 2.1 Introduction; 2.2 Definitions and Graph Matching Methods; 2.3 Learning Edit Costs; 2.4 Experimental Evaluation; 2.5 Discussion and Conclusions; References; 3 GRAPH VISUALIZATION AND DATA MINING; 3.1 Introduction; 3.2 Graph Drawing Techniques; 3.3 Examples of Visualization Systems; 3.4 Conclusions; References 4 GRAPH PATTERNS AND THE R-MAT GENERATOR4.1 Introduction; 4.2 Background and Related Work; 4.3 NetMine and R-MAT; 4.4 Experiments; 4.5 Conclusions; References; Part II MINING TECHNIQUES; 5 DISCOVERY OF FREQUENT SUBSTRUCTURES; 5.1 Introduction; 5.2

Preliminary Concepts; 5.3 Apriori-based Approach; 5.4 Pattern Growth Approach; 5.5 Variant Substructure Patterns; 5.6 Experiments and Performance Study; 5.7 Conclusions; References; 6 FINDING TOPOLOGICAL FREQUENT PATTERNS FROM GRAPH DATASETS; 6.1 Introduction; 6.2 Background Definitions and Notation 6.3 Frequent Pattern Discovery from Graph Datasets-Problem Definitions6.4 FSG for the Graph-Transaction Setting; 6.5 SIGRAM for the Single-Graph Setting; 6.6 GREW-Scalable Frequent Subgraph Discovery Algorithm; 6.7 Related Research; 6.8 Conclusions; References; 7 UNSUPERVISED AND SUPERVISED PATTERN LEARNING IN GRAPH DATA; 7.1 Introduction; 7.2 Mining Graph Data Using Subdue; 7.3 Comparison to Other Graph-Based Mining Algorithms; 7.4 Comparison to Frequent Substructure Mining Approaches; 7.5 Comparison to ILP Approaches; 7.6 Conclusions; References; 8 GRAPH GRAMMAR LEARNING; 8.1 Introduction 8.2 Related Work8.3 Graph Grammar Learning; 8.4 Empirical Evaluation; 8.5 Conclusion; References; 9 CONSTRUCTING DECISION TREE BASED ON CHUNKINGLESS GRAPH-BASED INDUCTION; 9.1 Introduction; 9.2 Graph-Based Induction Revisited; 9.3 Problem Caused by Chunking in B-GBI; 9.4 Chunkingless Graph-Based Induction (CI-GBI); 9.5 Decision Tree Chunkingless Graph-Based Induction (DT-CIGBI); 9.6 Conclusions; References; 10 SOME LINKS BETWEEN FORMAL CONCEPT ANALYSIS AND GRAPH MINING; 10.1 Presentation; 10.2 Basic Concepts and Notation; 10.3 Formal Concept Analysis 10.4 Extension Lattice and Description Lattice Give Concept Lattice10.5 Graph Description and Galois Lattice; 10.6 Graph Mining and Formal Propositionalization; 10.7 Conclusion; References; 11 KERNEL METHODS FOR GRAPHS; 11.1 Introduction; 11.2 Graph Classification; 11.3 Vertex Classification; 11.4 Conclusions and Future Work; References; 12 KERNELS AS LINK ANALYSIS MEASURES; 12.1 Introduction; 12.2 Preliminaries; 12.3 Kernel-based Unified Framework for Importance and Relatedness; 12.4 Laplacian Kernels as a Relatedness Measure; 12.5 Practical Issues; 12.6 Related Work 12.7 Evaluation with Bibliographic Citation Data

Sommario/riassunto

This text takes a focused and comprehensive look at mining data represented as a graph, with the latest findings and applications in both theory and practice provided. Even if you have minimal background in analyzing graph data, with this book you'll be able to represent data as graphs, extract patterns and concepts from the data, and apply the methodologies presented in the text to real datasets. There is a misprint with the link to the accompanying Web page for this book. For those readers who would like to experiment with the techniques found in this book or test their own ideas on graph