

1. Record Nr.	UNINA9910809103003321
Autore	Riesen Kaspar
Titolo	Graph classification and clustering based on vector space embedding / / Kaspar Riesen & Horst Bunke
Pubbl/distr/stampa	Singapore ; ; Hackensack, N.J., : World Scientific Pub. Co., 2010
ISBN	1-283-14450-6 9786613144508 981-4304-72-7
Edizione	[1st ed.]
Descrizione fisica	1 online resource (330 p.)
Collana	Series in machine perception and artificial intelligence ; ; v. 77
Altri autori (Persone)	BunkeHorst
Disciplina	006.42
Soggetti	Vector spaces Cluster theory (Nuclear physics)
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	Preface; Acknowledgments; Contents; 1. Introduction and Basic Concepts; 2. Graph Matching; 3. Graph Edit Distance; 4. Graph Data; 5. Kernel Methods; 6. Graph Embedding Using Dissimilarities; 7. Classification Experiments with Vector Space Embedded Graphs; 8. Clustering Experiments with Vector Space Embedded Graphs; 9. Conclusions; Appendix A Validation of Cost Parameters; Appendix B Visualization of Graph Data; Appendix C Classifier Combination; Appendix D Validation of a k-NN classifier in the Embedding Space; Appendix E Validation of a SVM classifier in the Embedding Space Appendix F Validation of Lipschitz Embeddings Appendix G Validation of Feature Selection Algorithms and PCA Reduction; Appendix H Validation of Classifier Ensemble; Appendix I Validation of Kernel k-Means Clustering; Appendix J Confusion Matrices; Bibliography; Index
Sommario/riassunto	This book is concerned with a fundamentally novel approach to graph-based pattern recognition based on vector space embedding of graphs. It aims at condensing the high representational power of graphs into a computationally efficient and mathematically convenient feature vector. This volume utilizes the dissimilarity space representation originally proposed by Duin and Pekalska to embed graphs in real vector spaces. Such an embedding gives one access to all algorithms developed in the

past for feature vectors, which has been the predominant representation formalism in pattern recognition and r
