

1. Record Nr.	UNINA9910144106503321
Autore	Xu Rui
Titolo	Clustering / / Rui Xu, Donald C. Wunsch II
Pubbl/distr/stampa	Piscataway, New Jersey : , : IEEE Press, , c2009 [Piscataway, New Jersey] : , : IEEE Xplore, , 2008
ISBN	1-281-93756-8 9786611937560 0-470-38277-5 0-470-38278-3
Descrizione fisica	1 online resource (370 p.)
Collana	IEEE Press Series on Computational Intelligence ; ; 10
Classificazione	54.69
Disciplina	519.53
Soggetti	Cluster analysis Multivariate analysis
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 (p. 293-330) and indexes.
Nota di contenuto	PREFACE -- 1. CLUSTER ANALYSIS -- 1.1. Classification and Clustering -- 1.2. Definition of Clusters -- 1.3. Clustering Applications -- 1.4. Literature of Clustering Algorithms -- 1.5. Outline of the Book -- 2. PROXIMITY MEASURES -- 2.1. Introduction -- 2.2. Feature Types and Measurement Levels -- 2.3. Definition of Proximity Measures -- 2.4. Proximity Measures for Continuous Variables -- 2.5. Proximity Measures for Discrete Variables -- 2.6. Proximity Measures for Mixed Variables -- 2.7. Summary -- 3. HIERARCHICAL CLUSTERING. -- 3.1. Introduction -- 3.2. Agglomerative Hierarchical Clustering -- 3.3. Divisive Hierarchical Clustering -- 3.4. Recent Advances -- 3.5. Applications -- 3.6. Summary -- 4. PARTITIONAL CLUSTERING -- 4.1. Introduction -- 4.2. Clustering Criteria -- 4.3. K-Means Algorithm -- 4.4. Mixture Density-Based Clustering -- 4.5. Graph Theory-Based Clustering -- 4.6. Fuzzy Clustering -- 4.7. Search Techniques-Based Clustering Algorithms -- 4.8. Applications -- 4.9. Summary -- 5. NEURAL NETWORK-BASED CLUSTERING -- 5.1. Introduction -- 5.2. Hard Competitive Learning Clustering -- 5.3. Soft Competitive Learning Clustering -- 5.4. Applications -- 5.5. Summary -- 6. KERNEL-BASED CLUSTERING -- 6.1. Introduction -- 6.2. Kernel Principal Component

Analysis -- 6.3. Squared-Error-Based Clustering with Kernel Functions -- 6.4. Support Vector Clustering -- 6.5. Applications -- 6.6. Summary -- 7. SEQUENTIAL DATA CLUSTERING -- 7.1. Introduction -- 7.2. Sequence Similarity -- 7.3. Indirect Sequence Clustering -- 7.4. Model-Based Sequence Clustering -- 7.5. Applications--Genomic and Biological Sequence -- 7.6. Summary -- 8. LARGE-SCALE DATA CLUSTERING -- 8.1. Introduction -- 8.2. Random Sampling Methods -- 8.3. Condensation-Based Methods -- 8.4. Density-Based Methods -- 8.5. Grid-Based Methods -- 8.6. Divide and Conquer -- 8.7. Incremental Clustering -- 8.8. Applications -- 8.9. Summary -- 9. DATA VISUALIZATION AND HIGH-DIMENSIONAL DATA CLUSTERING. 9.1. Introduction -- 9.2. Linear Projection Algorithms -- 9.3. Nonlinear Projection Algorithms -- 9.4. Projected and Subspace Clustering -- 9.5. Applications -- 9.6. Summary -- 10. CLUSTER VALIDITY -- 10.1. Introduction -- 10.2. External Criteria -- 10.3. Internal Criteria -- 10.4. Relative Criteria -- 10.5. Summary -- 11. CONCLUDING REMARKS -- PROBLEMS -- REFERENCES -- AUTHOR INDEX -- SUBJECT INDEX.

Sommario/riassunto

This is the first book to take a truly comprehensive look at clustering. It begins with an introduction to cluster analysis and goes on to explore: proximity measures; hierarchical clustering; partition clustering; neural network-based clustering; kernel-based clustering; sequential data clustering; large-scale data clustering; data visualization and high-dimensional data clustering; and cluster validation. The authors assume no previous background in clustering and their generous inclusion of examples and references help make the subject matter comprehensible for readers of varying levels and backgrounds.
