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| Autore | Härdle Wolfgang Karl |
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Correspondence Analysis -- 16 Canonical Correlation Analysis -- 17 Multidimensional Scaling -- 18 Conjoint Measurement Analysis -- 19 Applications in Finance -- 20 Computationally Intensive Techniques -- 21 Locally Linear Embedding -- 22 Stochastic Neighborhood Embedding -- 23 Uniform Manifold Approximation and Projection -- Part IV Appendix -- A Symbols and Notations -- B Data -- Index.

Sommario/riassunto

Now in its sixth edition, this textbook presents the tools and concepts used in multivariate data analysis in a style accessible for non-mathematicians and practitioners. Each chapter features hands-on exercises that showcase applications across various fields of multivariate data analysis. These exercises utilize high-dimensional to ultra-high-dimensional data, reflecting real-world challenges in big data analysis. For this new edition, the book has been updated and revised and now includes new chapters on modern machine learning techniques for dimension reduction and data visualization, namely locally linear embedding, t-distributed stochastic neighborhood embedding, and uniform manifold approximation and projection, which overcome the shortcomings of traditional visualization and dimension reduction techniques. Solutions to the book’s exercises are supplemented by R and MATLAB or SAS computer code and are available online on the Quantlet and Quantinar platforms. Practical exercises from this book and their solutions can also be found in the accompanying Springer book by W.K. Härdle and Z. Hlávka: Multivariate Statistics - Exercises and Solutions.