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	Titolo	Guide to Intelligent Data Science : How to Intelligently Make Use of Real Data / / by Michael R. Berthold, Christian Borgelt, Frank Höppner, Frank Klawonn, Rosaria Silipo
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	Edizione	[2nd ed. 2020.]
	Descrizione fisica	1 online resource (XIII, 420 p. 179 illus., 122 illus. in color.)
	Collana	Texts in Computer Science, , 1868-095X
	Disciplina	006.3
	Soggetti	Data mining Machine learning Quantitative research Data Mining and Knowledge Discovery Machine Learning Data Analysis and Big Data
	Lingua di pubblicazione	Inglese
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	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Introduction -- Practical Data Analysis: An Example -- Project Understanding -- Data Understanding -- Principles of Modeling -- Data Preparation -- Finding Patterns -- Finding Explanations -- Finding Predictors -- Evaluation and Deployment -- The Labelling Problem -- Appendix A: Statistics -- Appendix B: KNIME.
	Sommario/riassunto	Making use of data is not anymore a niche project but central to almost every project. With access to massive compute resources and vast amounts of data, it seems at least in principle possible to solve any problem. However, successful data science projects result from the intelligent application of: human intuition in combination with computational power; sound background knowledge with computer-aided modelling; and critical reflection of the obtained insights and results. Substantially updating the previous edition, then entitled Guide to Intelligent Data Analysis, this core textbook continues to provide a hands-on instructional approach to many data science techniques, and explains how these are used to solve real world problems. The work

balances the practical aspects of applying and using data science techniques with the theoretical and algorithmic underpinnings from mathematics and statistics. Major updates on techniques and subject coverage (including deep learning) are included. Topics and features: Guides the reader through the process of data science, following the interdependent steps of project understanding, data understanding, data blending and transformation, modeling, as well as deployment and monitoring Includes numerous examples using the open source KNIME Analytics Platform, together with an introductory appendix Provides a review of the basics of classical statistics that support and justify many data analysis methods, and a glossary of statistical terms Integrates illustrations and case-study-style examples to support pedagogical exposition Supplies further tools and information at an associated website This practical and systematic textbook/reference is a "need-to-have" tool for graduate and advanced undergraduate students and essential reading for all professionals who face data science problems. Moreover,it is a "need to use, need to keep" resource following one's exploration of the subject. Prof. Dr. Michael R. Berthold is Professor for Bioinformatics and Information Mining at the University of Konstanz. Prof. Dr. Christian Borgelt is Professor for Data Science at the Paris Lodron University of Salzburg. Prof. Dr. Frank Höppner is Professor of Information Engineering at Ostfalia University of Applied Sciences. Prof. Dr. Frank Klawonn is Professor for Data Analysis and Pattern Recognition at the same institution and head of the Biostatistics Group at the Helmholtz Centre for Infection Research. Dr. Rosaria Silipo is a Principal Data Scientist and Head of Evangelism at KNIME AG.