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Soggetti	Computational intelligence Optical data processing Data mining Computational Intelligence Image Processing and Computer Vision Data Mining and Knowledge Discovery
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Data Sets and Proper Statistical Analysis of Data Mining Techniques -- Data Preparation Basic Models -- Dealing with Missing Values -- Dealing with Noisy Data -- Data Reduction -- Feature Selection -- Instance Selection -- Discretization -- A Data Mining Software Package Including Data Preparation and Reduction: KEEL.
Sommario/riassunto	Data Preprocessing for Data Mining addresses one of the most important issues within the well-known Knowledge Discovery from Data process. Data directly taken from the source will likely have inconsistencies, errors or most importantly, it is not ready to be considered for a data mining process. Furthermore, the increasing amount of data in recent science, industry and business applications, calls to the requirement of more complex tools to analyze it. Thanks to data preprocessing, it is possible to convert the impossible into possible, adapting the data to fulfill the input demands of each data

mining algorithm. Data preprocessing includes the data reduction techniques, which aim at reducing the complexity of the data, detecting or removing irrelevant and noisy elements from the data. This book is intended to review the tasks that fill the gap between the data acquisition from the source and the data mining process. A comprehensive look from a practical point of view, including basic concepts and surveying the techniques proposed in the specialized literature, is given. Each chapter is a stand-alone guide to a particular data preprocessing topic, from basic concepts and detailed descriptions of classical algorithms, to an incursion of an exhaustive catalog of recent developments. The in-depth technical descriptions make this book suitable for technical professionals, researchers, senior undergraduate and graduate students in data science, computer science and engineering.
