Record Nr. UNINA9910254845803321 Autore Aggarwal Charu C Titolo Outlier Analysis / / by Charu C. Aggarwal Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2017 3-319-47578-9 **ISBN** Edizione [2nd ed. 2017.] 1 online resource (XXII, 466 p. 78 illus., 13 illus. in color.) Descrizione fisica Disciplina 006.312 Data mining Soggetti **Statistics** Artificial intelligence Data Mining and Knowledge Discovery Statistics and Computing/Statistics Programs Artificial Intelligence Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto An Introduction to Outlier Analysis -- Probabilistic Models for Outlier Detection -- Linear Models for Outlier Detection -- Proximity-Based Outlier Detection -- High-Dimension Outlier Detection -- Outlier Ensembles -- Supervised Outlier Detection -- Categorical, Text, and Mixed Attribute Data -- Time Series and Streaming Outlier Detection --Outlier Detection in Discrete Sequences -- Spatial Outlier Detection --Outlier Detection in Graphs and Networks -- Applications of Outlier Analysis. Sommario/riassunto This book provides comprehensive coverage of the field of outlier analysis from a computer science point of view. It integrates methods from data mining, machine learning, and statistics within the computational framework and therefore appeals to multiple communities. The chapters of this book can be organized into three categories: Basic algorithms: Chapters 1 through 7 discuss the fundamental algorithms for outlier analysis, including probabilistic and

> statistical methods, linear methods, proximity-based methods, highdimensional (subspace) methods, ensemble methods, and supervised methods. Domain-specific methods: Chapters 8 through 12 discuss

outlier detection algorithms for various domains of data, such as text, categorical data, time-series data, discrete sequence data, spatial data, and network data. Applications: Chapter 13 is devoted to various applications of outlier analysis. Some guidance is also provided for the practitioner. The second edition of this book is more detailed and is written to appeal to both researchers and practitioners. Significant new material has been added on topics such as kernel methods, one-class support-vector machines, matrix factorization, neural networks, outlier ensembles, time-series methods, and subspace methods. It is written as a textbook and can be used for classroom teaching.