1. Record Nr. UNINA9910784996003321 Autore Rokach Lior Titolo Data mining with decision trees [[electronic resource] /]: theory and applications / / Lior Rokach, Oded Maimon Singapore, : World Scientific, c2008 Pubbl/distr/stampa 1-281-91179-8 **ISBN** 9786611911799 981-277-172-7 Descrizione fisica 1 online resource (263 p.) Collana Series in machine perception and artificial intelligence;; v. 69 Altri autori (Persone) MaimonOded Z Disciplina 006.312 Soggetti Data mining **Decision trees** 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. 215-242) and index. Nota di contenuto Preface; Contents; 1. Introduction to Decision Trees; 1.1 Data Mining and Knowledge Discovery; 1.2 Taxonomy of Data Mining Methods; 1.3 Supervised Methods; 1.3.1 Overview; 1.4 Classification Trees; 1.5 Characteristics of Classification Trees; 1.5.1 Tree Size; 1.5.2 The hierarchical nature of decision trees; 1.6 Relation to Rule Induction; 2. Growing Decision Trees; 2.0.1 Training Set; 2.0.2 Definition of the Classification Problem; 2.0.3 Induction Algorithms; 2.0.4 Probability Estimation in Decision Trees; 2.0.4.1 Laplace Correction; 2.0.4.2 No Match 2.1 Algorithmic Framework for Decision Trees2.2 Stopping Criteria; 3. Evaluation of Classification Trees; 3.1 Overview; 3.2 Generalization Error; 3.2.1 Theoretical Estimation of Generalization Error; 3.2.2 Empirical Estimation of Generalization Error; 3.2.3 Alternatives to the Accuracy Measure; 3.2.4 The F-Measure; 3.2.5 Confusion Matrix; 3.2.6 Classifier Evaluation under Limited Resources; 3.2.6.1 ROC Curves; 3.2.6.2 Hit Rate Curve; 3.2.6.3 Qrecall (Quota Recall); 3.2.6.4 Lift Curve; 3.2.6.5 Pearson Correlation Coegfficient; 3.2.6.6 Area Under Curve (AUC): 3.2.6.7 Average Hit Rate 3.2.6.8 Average Qrecall3.2.6.9 Potential Extract Measure (PEM); 3.2.7

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Sommario/riassunto

This is the first comprehensive book dedicated entirely to the field of decision trees in data mining and covers all aspects of this important technique. Decision trees have become one of the most powerful and popular approaches in knowledge discovery and data mining, the science and technology of exploring large and complex bodies of data in order to discover useful patterns. The area is of great importance because it enables modeling and knowledge extraction from the abundance of data available. Both theoreticians and practitioners are continually seeking techniques to make the process more