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Nota di contenuto	FOUNDATIONS OF SOFT CASE-BASED REASONING; CONTENTS; FOREWORD; PREFACE; ABOUT THE AUTHORS; 1 INTRODUCTION; 1.1 Background; 1.2 Components and Features of Case-Based Reasoning; 1.2.1 CBR System versus Rule-Based System; 1.2.2 CBR versus Human Reasoning; 1.2.3 CBR Life Cycle; 1.3 Guidelines for the Use of Case-Based Reasoning; 1.4 Advantages of Using Case-Based Reasoning; 1.5 Case Representation and Indexing; 1.5.1 Case Representation; 1.5.2 Case Indexing; 1.6 Case Retrieval; 1.7 Case Adaptation; 1.8 Case Learning and Case-Base Maintenance; 1.8.1 Learning in CBR Systems 1.8.2 Case-Base Maintenance1.9 Example of Building a Case-Based Reasoning System; 1.9.1 Case Representation; 1.9.2 Case Indexing; 1.9.3 Case Retrieval; 1.9.4 Case Adaptation; 1.9.5 Case-Base Maintenance; 1.10 Case-Based Reasoning: Methodology or Technology?; 1.11 Soft Case-Based Reasoning; 1.11.1 Fuzzy Logic;

1.11.2 Neural Networks; 1.11.3 Genetic Algorithms; 1.11.4 Some CBR Tasks for Soft Computing Applications; 1.12 Summary; References; 2 CASE REPRESENTATION AND INDEXING; 2.1 Introduction; 2.2 Traditional Methods of Case Representation; 2.2.1 Relational Representation
2.2.2 Object-Oriented Representation2.2.3 Predicate Representation; 2.2.4 Comparison of Case Representations; 2.3 Soft Computing Techniques for Case Representation; 2.3.1 Case Knowledge Representation Based on Fuzzy Sets; 2.3.2 Rough Sets and Determining Reducts; 2.3.3 Prototypical Case Generation Using Reducts with Fuzzy Representation; 2.4 Case Indexing; 2.4.1 Traditional Indexing Method; 2.4.2 Case Indexing Using a Bayesian Model; 2.4.3 Case Indexing Using a Prototype-Based Neural Network; 2.4.4 Case Indexing Using a Three-Layered Back Propagation Neural Network; 2.5 Summary; References
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3.4.3 Fuzzy c-Means Algorithm for Clustering3.5 Case Feature Weighting; 3.5.1 Using Gradient-Descent Technique and Neural Networks; 3.5.2 Using Genetic Algorithms; 3.6 Case Selection and Retrieval Using Neural Networks; 3.6.1 Methodology; 3.6.2 Glass Identification; 3.7 Case Selection Using a Neuro-Fuzzy Model; 3.7.1 Selection of Cases and Class Representation; 3.7.2 Formulation of the Network; 3.8 Case Selection Using Rough-Self Organizing Map; 3.8.1 Pattern Indiscernibility and Fuzzy Discretization of Feature Space; 3.8.2 Methodology for Generation of Reducts; 3.8.3 Rough SOM
3.8.4 Experimental Results

Sommario/riassunto

Provides a self-contained description of this important aspect of information processing and decision support technology.Presents basic definitions, principles, applications, and a detailed bibliography.Covers a range of real-world examples including control, data mining, and pattern recognition.