Download Multistrategy Learning

AN INFERENCE-BASED FRAMEWORK FOR MULTISTRATEGY LEARNING Gheorghe Tecuci (George Mason University and Romanian Academy) Abstract This chapter describes a general framework for multistrategy learning. One idea of this framework is to view learning as an inference process and to integrate the elementary inferencesMultistrategy Learning of Self-Organizing Map (SOM) and Particle Swarm Optimization (PSO) is commonly implemented in clustering domain due to its capabilities in handling complex data characteristics. However, some of these multistrategy learning architectures have weaknesses such as slow convergence time always being trapped in the local minima.Monostrategy learning systems can be very effective and useful if learning problems to which they are applied are sufficiently narrowly defined. Many real-world applications, however, pose learning problems that go beyond the capability of monostrategy learning methods.Multistrategy learning (MSL) is concerned with developing learning methods and systems that integrate different inferential and/or representational strategies in solving a given learning task. In general, a learning task is defined as a composition of three components: the type of knowledge to be learned, the input information available to the learner, and the learner’s prior (or background) knowledge.