

Business-Intelligence Mining of Large Decentralized Multimedia Datasets with a Distributed Multi-Agent System

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Abstract : The rapid generation of high volume and a broad variety of data from the application of new technologies pose challenges for the generation of business-intelligence. Most organizations and business owners need to extract data from multiple sources and apply analytical methods for the purposes of developing their business. Therefore, the recently decentralized data management environment is relying on a distributed computing paradigm. While data are stored in highly distributed systems, the implementation of distributed data-mining techniques is a challenge. The aim of this technique is to gather knowledge from every domain and all the datasets stemming from distributed resources. As agent technologies offer significant contributions for managing the complexity of distributed systems, we consider this for next-generation data-mining processes. To demonstrate agent-based business intelligence operations, we use agent-oriented modeling techniques to develop a new artifact for mining massive datasets.

Keywords : agent-oriented modeling (AOM), business intelligence model (BIM), distributed data mining (DDM), multi-agent system (MAS)

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