Autonomous Intelligent Systems: Agents and Data Mining

International Workshop, AIS-ADM 2005
St. Petersburg, Russia, June 2005
Proceedings

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This volume contains the papers presented at the International Workshop "Autonomous Intelligent Systems: Agents and Data Mining" (AIS-ADM 2005) held in St. Petersburg, Russia, during June 6-8, 2005. The workshop was - ganized by the St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences (SPIIRAS) in cooperation with Binghamton U- versity (SUNY, USA) and the Web Intelligence Consortium. Autonomous Intelligent Systems (AIS) constitute an emerging class of int- ligent information systems integrating recent advances in various technologies of Art?cial Intelligence. Modern AIS incorporate multi-agent and data mining systemsprovidinganewdimensionforfurtherprogressinintelligentinformation technology. AIS-ADM 2005 provided an international forum to multi-agent and data mining researchers. A total of 29 papers from 15 countries relating to various aspects of both theory and applications of multi-agent systems, data mining and their joint area were submitted to AIS-ADM 2005. Out of them 17 were selected as regular presentations. Three technical sessions were organized, namely: In- gration of Multi-agent and Data Mining Techniques; Ontology Issues and Web Mining; and Applications and Case Studies of the Integrated Technology. The panel discussion was devoted to the mutual enrichment and challenging pr- lems emerging in the joint area of research. The AIS-ADM 2005 program was enriched by six distinguished invited speakers: Nick Jennings, Chengqi Zhang, Mircea Negoita, Pericles Mitkas, Hai Zhuge and Leonid Perlovsky.

Autonomous Intelligent Systems Agents And Data Mining Related Books

Principles of Robot Motion: Theory, Algorithms, and Implementations (Intelligent Robotics and Autonomous Agents series)

Robot motion planning has become a major focus of robotics. Research findings can be applied not only to robotics but to planning routes on circuit boards, directing digital actors in computer graphics, robot-assisted surgery and medicine, and in novel areas such as drug design and protein folding. This text reflects the great advances that have taken place in the last ten years, including sensor-based planning, probabilistic planning, localization and mapping, and motion planning for dynamic an...

The Robotics Primer (Intelligent Robotics and Autonomous Agents series)

The Robotics Primer offers a broadly accessible introduction to robotics for students at pre-university and university levels, robot hobbyists, and anyone interested in this burgeoning field. The text takes the reader from the most basic concepts (including perception and movement) to the most novel and sophisticated applications and topics (humanoids, shape-shifting robots, space robotics), with an emphasis on what it takes to create autonomous intelligent robot behavior. The core concepts of r...

Data Mining: Foundations and Intelligent Paradigms

There are many invaluable books available on data mining theory and applications. However, in compiling a volume titled DATA MINING: Foundations and Intelligent Paradigms: Volume 3: Medical, Health, Social, Biological and other Applications we wish to introduce some of the latest developments to a broad audience of both specialists and non-specialists in this field.

Web Data Mining: Exploring Hyperlinks, Contents, and Usage Data (Data-Centric Systems and Applications)

Web mining aims to discover useful information and knowledge from Web hyperlinks, page contents, and usage data. Although Web mining uses many conventional data mining techniques, it is not purely an application of traditional data mining due to the semi-structured and unstructured nature of the Web data. The field has also developed many of its own algorithms and techniques. Liu has written a comprehensive text on Web mining, which consists of two parts. The first part covers the data mining an...

Intelligent Agents and Multi-Agent Systems

This book constitutes the proceedings of the the 11th Pacific Rim International Conference on Multi-Agents, PRIMA 2008, held in Hanoi, Vietnam, in December 2008. The 19 regular papers and 22 short papers presented together with 3 keynote speeches, were carefully reviewed and selected from 56 submissions. Many current subjects in multi-agent research and development are addressed, ranging from theoretical and methodological issues to various applications in different fields. There was a track on ...
The increasing volume of data in modern business and science calls for more complex and sophisticated tools. Although advances in data mining technology have made extensive data collection much easier, its still always evolving and there is a constant need for new techniques and tools that can help us transform this data into useful information and knowledge. Since the previous editions publication, great advances have been made in the field of data mining. Not only does the third of edition of ...

Mainstream data mining techniques significantly limit the role of human reasoning and insight. Likewise, in data visualization, the role of computational analysis is relatively small. The power demonstrated individually by these approaches to knowledge discovery suggests that somehow uniting the two could lead to increased efficiency and more valuable results. But is this true? How might it be achieved? And what are the consequences for data-dependent enterprises?

Information Visualization in Data Mining and Knowledge Discovery offers a thorough grounding in machine learning concepts as well as practical advice on applying machine learning tools and techniques in real-world data mining situations. This highly anticipated third edition of the most acclaimed work on data mining and machine learning will teach you everything you need to know about preparing inputs, interpreting outputs, evaluating results, and the algorithmic methods at the heart of successful d...

Ensemble methods have been called the most influential development in Data Mining and Machine Learning in the past decade. They combine multiple models into one usually more accurate than the best of its components. Ensembles can provide a critical boost to industrial challenges -- from investment timing to drug discovery, and fraud detection to recommendation systems -- where predictive accuracy is more vital than model interpretability. Ensembles are useful with all modeling algorithms, but th...

Privacy and security risks arising from the application of different data mining techniques to large institutional data repositories have been solely investigated by a new research domain, the so-called privacy preserving data mining. Association rule hiding is a new technique in data mining, which studies the problem of hiding sensitive association rules from within the data. Association Rule Hiding for Data Mining addresses the problem of "hiding" sensitive association rules, and introduces a n...

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