

Workshop on The Methodology of Applying Machine Learning; (Problem Definition, Task Decomposition and Technique Selection)

Preface

After the successful ICML-97 workshop we submitted a follow up proposal for the ICML-98. We got the request to make it a joined AAAI/ICML workshop, which we gladly accepted. This years workshop on the application of machine learning aims at proceeding from the point where last years workshop ended. The workshops program reflects the continuing progress that is made in the field and which initiates an increasing focus on methodological aspects rather than technical ones. The workshop contains papers that evaluate "lessons learned" from practical projects, as well as methodological concerns about machine learning technologies in different paradigms.

This years workshop contains of three paper sessions, where 8 papers are presented. On top of that there are four invited speakers: Lorenze Saitta (Italy), Padraic Smyth (USA), Ronny Kohavi (USA) and Ivan Bratko (Slovenia). Two discussion sessions are included in order to garantuee the informal working atmosphere we found very productive in former workshops.

More information including workshop summaries and proceedings of this and former workshops are available from the following URLs:

ICML 1995 workshop on ML application:

<http://www.aic.nrl.navy.mil/aha/imlc95-workshop/>

ICML 1997 workshop on ML application:

<http://www.aifb.uni-karlsruhe.de/WBS/ICML97/ICML97.html>

AAAI98/ICML98 joint workshop on the methodology of applying ML:

<http://www.aifb.uni-karlsruhe.de/WBS/AAAI98/>

We are looking forward to a fruitful and interesting workshop with good-quality contributions,

The workshop organizers,

Floor Verdenius,

Robert Engels,

David Aha

Diane Cook is an Associate Professor in the Computer Science department at the University of Texas at Arlington. Her research interests include machine planning, machine learning, robotics, and parallel algorithms. She received her Ph.D. from the University of Illinois in 1990. Her current research projects and recent publications can be found at <http://www-cse.uta.edu/cook>.

Pedro Domingos is an assistant professor at the Technical University of Lisbon, Portugal. He received a PhD in Information and Computer Science from the University of California at Irvine. His research interests are in machine learning and data mining. He is the author of over 40 technical publications in the fields of multistrategy learning, multiple learned models, probabilistic learning, scaling up machine learning algorithms, model selection, anytime reasoning, computer graphics, and others.

Robert Engels studied artificial intelligence at the university of Amsterdam (NL). He wrote his Masters Thesis at the university of Stockholm (S). During 1995-1997 he conducted research for his PhD in a cooperation project of the university of Karlsruhe (D) and Daimler Benz AG. His research papers are available from URL: <http://www.aifb.uni-karlsruhe.de/WBS/ren/>

William H. Hsu is a doctoral candidate in the Department of Computer Science at the University of Illinois at Urbana-Champaign (UIUC) and a research assistant in the Knowledge Based Systems Laboratory (<http://www-kbs.ai.uiuc.edu>), part of the Artificial Intelligence Group at the Beckman Institute for Advanced Science and Technology. He received BS degrees in Computer Science and Mathematical Sciences and the MSE degree in Computer Science from The Johns Hopkins University in 1993. Under the direction of Professor Sylvian R. Ray, he is currently completing his dissertation on heterogeneous time series learning with probabilistic networks (Bayesian networks and temporal ANNs). His research interests include time series learning, mining of large-scale geospatial databases, intelligent systems for computer-assisted instruction (training and critiquing) and control automation, simulation-based monitoring and decision support systems, and integration of symbolic and seminumerical learning methods.

Stan Matwin is a Professor of Information Technology and Engineering

at the University of Ottawa. Stan's research interests are in Data Mining and Machine Learning in the presence of domain knowledge. Stan is keenly interested in applications of Machine Learning to real-life problems. He is Vice-President (Research and Development) of MetaGuide, Inc., a startup company working on Data Mining with domain models.

Sylvian R. Ray is Professor of Computer Science and and Electrical and Computer Engineering at the University of Illinois at Urbana-Champaign (UIUC) and an adjunct member of the Beckman Institute for Advanced Science and Technology. He received his Ph.D. in Electrical Engineering from UIUC in 1961. His research interests include time series prediction, processing and monitoring of biomedical signals, spatiotemporal sequence learning using Bayesian and artificial neural networks, and modularity in neural networks. Recent applications of his research include storage and recognition of spatiotemporal patterns, interpretation of multichannel or multimodal sequences, intelligent systems for diagnosis and monitoring of sleep disorders, and simulation of sensor fusion in neurobiological structures.

Maarten van Someren: My research interests are in machine learning, knowledge acquisition and human learning. I teach and do research on these subjects at the Department of Social Science Informatics at the University of Amsterdam. My workshop paper, together with Floor Verdenius, is part of a project of developing a methodology for the use of machine learning in developing intelligent systems. If you want to know more, see <http://www.swi.psy.uva.nl/usr/maarten/home.html>.

Akihiro Suyama is a doctor candidate of computer science department at Shizuoka University in Japan. He received his B.E. and M.E. degrees in computer science from Shizuoka University in 1995 and 1997, respectively. His research interests include ontologies engineering and machine learning. He is a member of JSAI.

Andrew Stranieri lectures in computer science and information systems at the University of Ballarat. His recently submitted PhD focuses upon modelling discretionary domains.

Floor Verdenius studied software engineering at the Technical College in

Groningen (NL) and received his Masters Degree in artificial intelligence from the linguistic faculty of the University of Groningen. He has worked as a software engineer on decision support systems (1987-1989), scientific researcher (an inductive learning application project) and as a consultant on Neural Network applications (1990-1993). In 1993 he joined the Agrotechnological Research Institute (ATO-DLO), where he has been working on applied topics. Examples are the planning of fruit treatment recipes and the scheduling of waste water treatment processes. In this work he has applied several learning techniques. His main research interest is the application of inductive learning techniques for solving real world problems, which will also be the topic of his PhD work.

Takahira Yamaguchi is a professor at computer science department at Shizuoka University in Japan. He received his B.E., M.E. and Ph.D degrees in telecommunication engineering from Osaka University in 1979, 1981 and 1984, respectively. His research interests include ontologies engineering including legal ontologies and enterprise modeling and machine learning. He is a member of JSAI, AAI, IEEE-CS and ACM.

Shar Whisenhunt is an undergraduate Computer Science student at the University of Texas at Arlington. She is supported by the NSF AMP program and is currently a McNair scholar. Her research interests include machine learning, robotics, and parallel algorithms.

John Zeleznikow(PhD) has taught computer science, information systems, mathematics and law in Australia, Canada, the Netherlands and the United States. He has written over a hundred refereed papers on the general topic of intelligent decision support systems. Together with his then PhD student, Andrew Stranieri, he developed the Split Up system.