CfP: Learning with Multiple Views
Workshop at the International Conference on Machine Learning 2005

http://www-ai.cs.uni-dortmund.de/MULTIVIEW2005/

Topic and Goals of the Workshop

Multi-view learning is a natural, yet non-standard new problem setting; it describes the problem of learning from data where observations are represented by multiple independent sets of features. A typical example is learning to classify web pages by either the words on the page or the words contained in anchor texts of links to the page.

Multi-view learning methods have been studied by Yarowsky (1995) and Blum and Mitchell (1998), who noticed that having multiple representations of examples can improve classification performance when in addition to labeled examples, many unlabeled examples are available. A recent result by Abney (2002) suggests that there may be an underlying principle which gives rise to a family of new methods: The disagreement rate of two independent hypotheses upper-bounds the error rate of either hypothesis. By minimizing the disagreement rate on unlabeled data, the error rate can be minimized.

In the last 2-3 years, several new supervised and unsupervised methods have been proposed which appear to utilize this consensus maximization principle in one way or another. However, in many cases the contributors are not to the full extend aware of the relationships between their methods and a possible common underlying principle. The workshop aims at bringing together researchers working on learning problems with multiply represented instances and consensus maximizing methods; our goals are to make the intrinsic structure of this field more clearly visible and to bring this interesting area to the attention of additional researchers.

Submission

Participants should submit a 6 page paper in PDF format, following the format guidelines of the main ICML conference. Papers must be submitted until April 1st via the workshop website.

Possible Topics Include:
active and semi-supervised learning
multi-view clustering and classification
text, web, and other applications
theoretical analyses
consensus maximization principle
analysis of algorithms: co-training, co-EM, ...
novel learning tasks (interpretability, constraints, ...)
independence of views: quantification and relevance
hierarchical, partitioning, spatial, spectral clustering
relation to other fields of learning (e.g., boosting)
generative and discriminative models

Important Dates

Apr 1, 2005	Paper submission deadline	May 13, 2005	Final paper deadline
Apr 22, 2005	Notification of acceptance	Aug 11, 2005	Workshop held

Organization

Co-Chairs: Stefan Rüping, University of Dortmund; Tobias Scheffer, Humboldt University, Berlin.

Program Committee:
Steven Abney, University of Michigan
Steffen Bickel, Humboldt University
Ulf Brefeld, Humboldt University
Sanjoy Dasgupta, UCSD
Johannes Fürnkranz, Darmstadt University
Rayid Ghani, Accenture
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Bernhard Schölkopf, MPI Tübingen