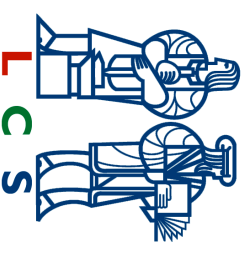


MIT2000-08: Adaptive Information Filtering with Minimal Instruction

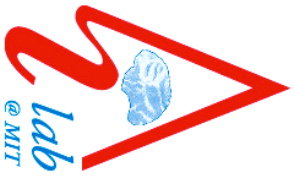
Tommi Jaakkola and Tomaso Poggio

ntt @ mit

Project Overview

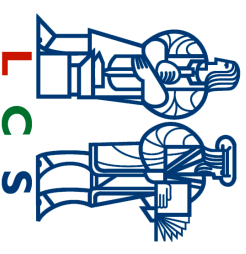


- We seek to fundamentally improve the search of relevant information from large relatively unstructured databases
- Our goal is to develop an optimal interactive retrieval system
 - We substantially extend and integrate existing machine learning methods to solve the associated challenges
 - We design and develop proof of concept tools



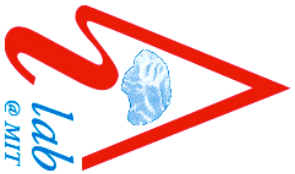
MIT2000-08: Adaptive Information Filtering with Minimal Instruction

Tommi Jaakkola and Tomaso Poggio



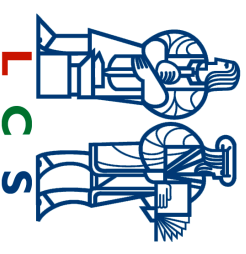
Progress Through June 2002

- Efficient active learning method for large domains
- Generally applicable continuation method for stable integration of heterogeneous data sources
- Information regularization approach to exploiting large numbers of unlabeled documents in filtering tasks
- Generalized low-rank matrix factorization approach to collaborative filtering



MIT2000-08: Adaptive Information Filtering with Minimal Instruction

Tommi Jaakkola and Tomaso Poggio



Research Plan for the Next Six Months

- Selected tasks:
 - Extension of the overall active learning approach to filtering problems involving multiple simultaneous topic categories (with Dr. Ueda)
 - Public release of software for stable integration of heterogeneous data sources
 - Extension, testing, and efficient implementation of information regularization for large filtering tasks
 - Concurrently solving multiple related retrieval tasks through a new matrix factorization approach to collaborative filtering