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.

Project Overview

Tommi Jaakkola and Tomaso Poggio

MIT2000-08: Adaptive Information Filtering with Minimal Instruction
Progress Through June 2002

Efficient active learning method for large domains

Generalized low-rank matrix factorization approach to collaborative filtering

Information regularization approach to documents in filtering tasks

Exploiting large numbers of unlabelled sources

Stable integration of heterogeneous data

Generalized applicable continuation method for domains

Tommi Jaakkola and Tomaso Poggio
Research Plan for the Next Six Months


Selected tasks:

• Concurrently solving multiple retrieval tasks
• Information regularization for large filtering tasks
• Extension, testing, and efficient implementation of heterogeneous data sources
• Public release of software for stable integration of simultaneous topic categories (with Dr. Ueda)
• Concurrency solving multiple related retrieval tasks

Extension of the overall active learning approach to collaborative filtering tasks through a new matrix factorization approach

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