

MIT2000-08: Adaptive Information Filtering with Minimal Instruction

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



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- Information theoretic formulation and the associated algorithms for optimally eliciting user feed-back at multiple levels of abstraction
- A new approach for combining multiple incomplete sources of information in a stable and accurate manner
- New representations and classification algorithms for exploiting sparse similarity assessments in large unannotated databases



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Research Plan for the Next Six Months

- Focus gradually shifting towards implementation and testing
- Specific tasks:
 - Design and development of a flexible user interface to support active learning
 - Expanding query flexibility
 - Active learning extension of robust multi-source allocation
 - Formulation of transfer across multiple tasks