Seminar: Selected Topics in IR
Presentation of topics

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Filtering vs. Retrieval

- „Collaborative Filtering“ is part of „Information Filtering“
- Also known as: „Recommender Systems“

\[ \begin{align*}
\text{Filtering} & \quad \text{Retrieval} \\
\begin{array}{c}
P_1 \\
\vdots \\
P_j \\
\vdots \\
P_m \\
\end{array} & \quad \begin{array}{c}
D_i \\
\rightarrow \\
\text{Resultlist:} \\
\quad \text{- ordered} \\
\quad \text{- yes/no} \\
A_i \\
\rightarrow \\
\text{Resultlist:} \\
\quad \text{- ordered} \\
\quad \text{- yes/no} \\
\end{array} \\
\begin{array}{c}
D_1 \\
\vdots \\
D_j \\
\vdots \\
D_n \\
\end{array}
\end{align*} \]
Collaborative Filtering

- Algorithmic Implementation of mouth-to-mouth propaganda
  - There are other people with a similar taste to mine
    - I may not know them
    - Everything they like, I will also like
  - There are also things I don’t know, but will like
    - Because these other people like them
Clustering

Flat Clustering

Hierarchical Clustering
Collaborative Filtering

- „Item-Based Collaborative Filtering Recommendation Algorithms“
- WWW 10, 2001
- B. Sarwar, G. Karypis, J. Konstan, J. Riedl

Some item-based recommendation algorithms are presented and compared against each other and a traditional user-based recommendation algorithm.
Flat and Hierarchical Clustering

- “Flat Clustering“, „Hierarchical Clustering“
- Introduction to Information Retrieval, Chapter 16/17, 2008
- C. Manning, P. Raghavan and H. Schütze

- The basic algorithms, techniques and concepts of clustering are presented along with some examples. Presentation includes some implementation work.