CS 7460 Collaborative Computing: Recommender Systems

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Why are recommendation systems a collaborative environment?

An important theme in the paper is the challenge of recommender systems in maintaining privacy of the user. When would we say that a recommender system transcends from being "intelligent" to "creepy"?

How transparent should recommender systems be? What are the advantages and disadvantages of such transparency?

One of you mentioned about the challenge of individual-centric differences in rating/liking item practices (e.g., super positive vs. super negative raters). How can this affect recommender systems? What are possible design solutions?

Recommender systems, due to their natural reliance on user's past activity, are challenged by the lack of serendipity. This can create what is known as "echo chambers". As an HCI researcher, what are possible ways to tackle this issue?

Continuing the serendipity thread, a user's tastes often change. This is particularly true for instance, in fashion item recommendation. Since recommender systems use historical data, they are less flexible to adapt to new trends. Is it possible to incorporate such changing user preferences?

Accounting for preference decay – different tastes change at different rates. How can recommender systems model such differential change in preferences/tastes of users?

Guided Navigation – Most items are not uni-dimensional. However recommender systems hardly take into account the diverse attributes of items while recommending them. How can this knowledge be incorporated into current systems?

The "long tail problem" – recommendations are best for those items which have many reviews/ratings. How can we support niche communities?

Adaptation problem — the same user's tastes may change in different contexts. Current recommender systems are not very good at handling that.

Multi-user problem — Netflix does a reasonable job.

Evaluating recommender systems — customer retention is important, but challenging to measure — takes months to see retention trends. What are alternative ways to do so?

Interpreting absence of user actions – recommender system know how to interpret positive actions e.g., rating an item, however what does it mean when a user does not rate/provide feedback?

The problem of inherently positive and inherently negative systems — biases in user reporting of ratings.

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