

Cross Domain Collaborative Filtering for Recommendation Systems:

Background:

Mining of Massive Data Sets

Distance measures, clustering, recommendation systems, matrix factorization
Coursera course, Jan. 19

Tensor decompositions and Applications

Basic tensor notation, operations, and factorizations

Graph Mining: Laws, tools, and case studies

Ch 14: SVD random walks and Tensors

Ch 15: Tensors

Data and Methodology:

Rethinking recommender research ecosystem: reproducibility, openness, and Lenskit

Some general comments on recommender research as a scientific project.

Evaluation is not handled consistently,

Difficult to reproduce and extend recommender systems research results

Important details are often omitted or unclear compounding the difficulty
of comparing results between papers or lines of work.

Lenskit is one among several open source recommender toolkits

Recommendation and Ratings Public Data Sets For Machine Learning

<https://gist.github.com/entaroaddun/1653794>

Papers:

Cross-domain recommender systems: A survey of the state of the art

Analysis, and taxonomy of the cross-domain recommendation task

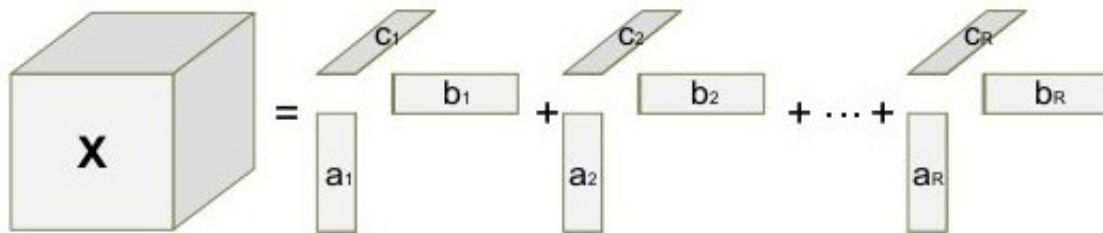
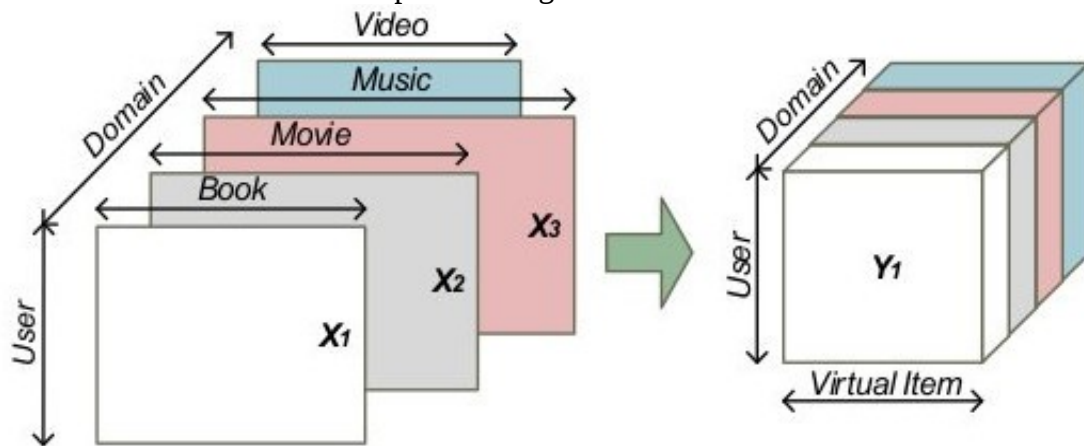
Relations between domains	Recommendation models	
	<i>Adaptive</i>	<i>Collective</i>
<i>Content-based</i>	<i>Attributes</i>	Azak 2010 [3]
	<i>Social tags</i>	Kaminskas & Ricci 2011 [8] Abel et al. 2011 [1] Szomszor et al. 2008 [18]
	<i>Semantic properties</i>	Fernández-Tobías et al. 2011 [6] Loizou 2009 [12]
	<i>Correlations</i>	Shi et al. 2011 [17]
<i>Collaborative filtering-based</i>	<i>Ratings</i>	Azak 2010 [3] Loizou 2009 [12] Berkovsky et al. 2008 [4] Winoto & Tang 2008 [20]
	<i>Rating patterns</i>	Li et al. 2009a [10] Li et al. 2009b [11]
	<i>Latent factors</i>	Pan et al. 2010 [15] Pan et al. 2011 [14]
	<i>Correlations</i>	Cremonesi et al. 2011 [5] Zhang et al. 2010 [21]

Hybrid approaches have “barely been investigated”.

Advantage of cross domain recommendation may not be increased accuracy
but added novelty and more diverse recommendations

Personalized recommendation via cross-Domain triadic factorizations

Uses Tensor decomposition to generate recommendations.



Data Collection:

Jester: <http://eigentaste.berkeley.edu/user/jokes.php>

Jester 4.0
Jokes for Your Sense of Humor

Jokes Displaying Initial Jokes (1/8) Jokes About Suggest a Joke Leave Feedback Register End Session

How many feminists does it take to screw in a light bulb?
That's not funny.

Instructions: Click anywhere on the rating bar. The closer you click to "More Funny," the better your rating of the joke, and the closer you click to "Less Funny," the worse your rating of the joke.

This message will disappear shortly.

Less Funny More Funny