

Recommender Systems

How filtering is used to predict user preferences

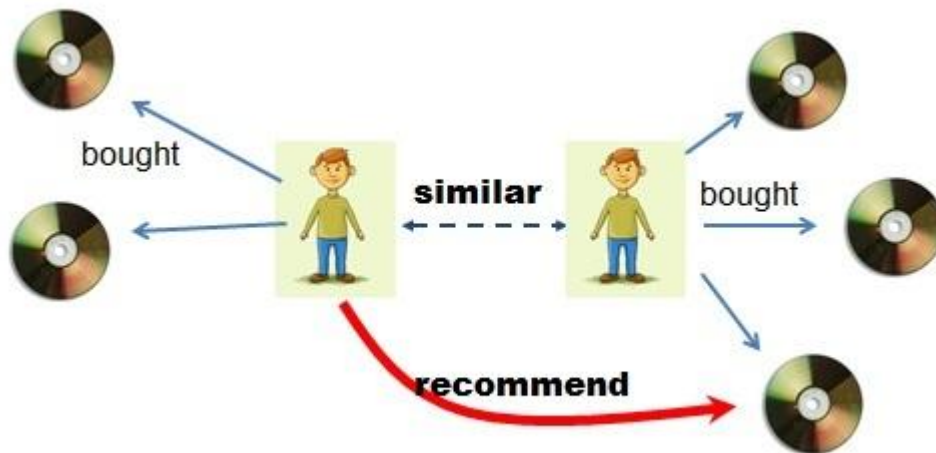
By Ahmed El-Razi

Collaborative filtering vs. Content-Based filtering

- Collaborative filtering: People who liked the same things you liked also like _____
- Content-based filtering: If you like this item, check out _____ item
- Collaborative filtering typically more complex
 - User sentiment
 - Unsupervised learning

Collaborative filtering

- Netflix/Yelp (uses user feedback on a particular product)
- Item-item: People who liked this item also liked _____
- User-item: People similar to you liked _____



Item-Item Content-Based Systems

- Neighborhood Methods (k-means)
- Ignores user attributes

Optical Zoom


- ☐ 3.9x & Under (221)
- ☐ 4x to 9.9x (78)
- ☐ 10x to 19.9x (16)
- ☐ 20x to 49.9x (9)
- ☐ 50x & Above (2)

Autofocus Points

- ☐ 0 to 9 (65)
- ☐ 10 to 19 (19)
- ☐ 20 to 29
- ☐ 30 to 39 (8)
- ☐ 40 to 49 (8)
- ☐ 50 to 59 (10)
- ☐ 60 & Above (8)

Maximum Digital Camera Resolution

- ☐ 11 MP & Under (6)
- ☐ 12 to 23 MP (71)
- ☐ 24 to 35 MP (41)
- ☐ 36 MP & Above (5)




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User-Item Collaborative Systems

- Calculate distance between people based on ratings
- Find the people who are most similar to one another

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Companies using recommender systems



Thank you.