

An illustration showing a person with dark hair and a light grey shirt sitting at a desk, looking at a large brown monitor. Above the person's head is a white speech bubble containing a brown short-sleeved shirt icon. To the right of the person, there are three clothing items: a brown long-sleeved button-down shirt, a brown short-sleeved t-shirt, and a partially visible orange short-sleeved t-shirt at the bottom. Dotted brown lines connect the brown long-sleeved shirt and the brown short-sleeved t-shirt to the orange t-shirt, suggesting a recommendation or relationship. The background is a light grey wall with a horizontal band of a slightly different shade.

Recommendation Systems

Recommendation System for an E-commerce Platform

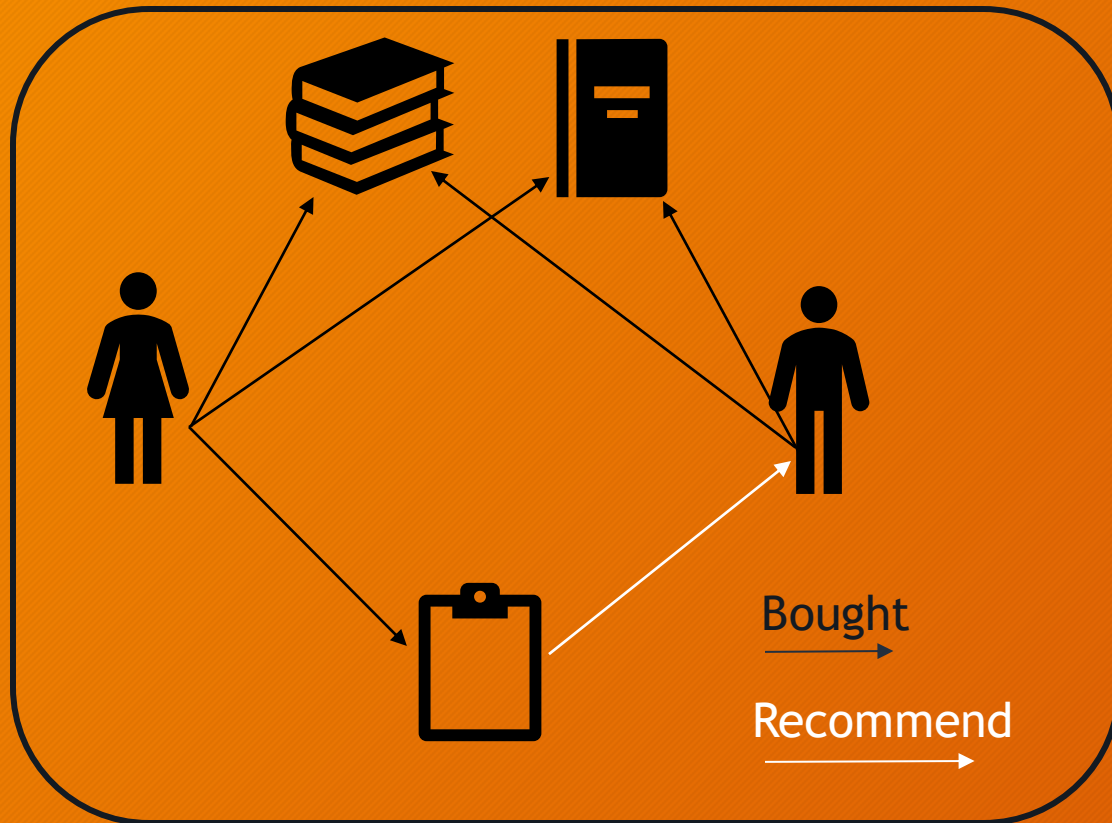
People say that every person is unique. **WRONG!!**

If you want to win a beauty pageant, then yes go ahead. There are a limited number of personalities in this world. And people with same personality have same kind of preferences.

Using this theory, we can recommend a product to the user which has been used by another user who shares some personality.



Working in simple terms



2 users have a similar purchase history. Due to which, our model puts them under one category. Now when one user buys a new product, it will be recommended to that another user as well.

Pros



Customization makes a user more satisfied



Enhances a user's buying speed.

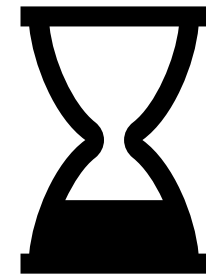
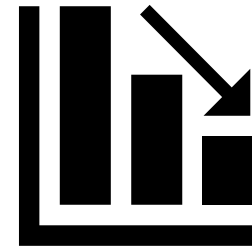


Increase in overall sales

Cons

But as they say, nothing's PERFECT, this recommendation approach has some downsides too:-

- Since users will get products they like in the very first instance, they won't bother exploring the rest of our products, hence reducing average time spent by a user on our application.
- Products that have not been bought by anyone won't get recommended.
- If the system's algorithm is not very efficient and it suggests completely opposite products, it can ruin a user's experience which can lead to user attrition.



A better architecture

- The approach mentioned in previous decks is called User-User Collaborative filtering.
- Why don't we rather use a hybrid recommendation system, which takes into consideration both users and products.
- In this approach, we have 2 recommending tabs:-
 - Similar Products
 - Products you may like

Similar Products

- Firstly, each item has some similar items based on its category, brand, color, specification, price etc.
- Take top 5 recommendations based on similarity.



- Secondly, The item that you just searched might have been bought or searched by other users.
- Based on these users' search & purchase history, take out top 5 items belonging to the same category of item you searched.

Products you may like

- The same approach that we have been talking about till now.
- Now, this tab will have products that have been bought or searched by similar users. Users that are just like you.
- But it won't be any random product, a product that belongs to same category under which your searched product falls.



Benefits of new approach

- Products that are similar but have not been rated by any user will also get included.
- Since this approach considers both users and products that they are searching, it will be more efficient at providing recommendations.

