PINTEREST

Pinterest uses Collaborative Filtering.

Collaborative Filtering:  Collaborative algorithm uses “User Behavior” for recommending items. They exploit behavior of other users and items in terms of transaction history, ratings, selection and purchase information. Other users’ behavior and preferences over the items are used to recommend items to the new users. In this case, features of the items are not known.

Basically, what Pinterest do is

1. It records all your recent activities and show them all combined at your home page.
2. Search engines works like normal search- most relevant or most popular designs are shown at the top
3. Sometimes the user is not getting the right words and is searching for something else so they provide some sets of words of the top of the pins to narrow down the search.

How to arrive at the related pins:

1. Click at the pins from any feed, we can see the related pins below
2. By home feed search
3. Another related pin feed

To have perfect search:

We click on an image which we think is related to us and by scrolling down, we can see more related images to have a broader mindset on the things we were searching for. So, we can explore those similar pins from there.

Recommendation Techniques:

1. The system see which 2 pins are saved together.
2. Historical Engagement Data- after seeing a close up pin, which pin did the users click on so that they can see which are the best results.
3. Machine Learning Model- ranking system: how relevant it is to the close up pin and how engaging it is to the user.
4. Choosing the same features pictures as one in the close up pin like the color, style, model, accessories etc.

Diagram

Description automatically generated

Types of searching

1. Searching for a specific item
2. Just scrolling the feed and liking anything

Hybrid Search Results:

1. Perform a search request with a rewritten query : like if the user is searching for some text and clicked the recommendations coming above, so the system rewrite the text written by the user + the recommended text.

Let us take an example: the user searched “Dogs”

And clicked on the recommendation “Puppy”

The system will search “Dogs” + “Puppy” and then give the results

1. Rewrite query: return the top candidates by similarity to query pin. Which means it will result the most relevant pin related to the close up pin.

RECOMMENDATION SYSTEM

There are four kinds of recommendation techniques, content-based, association, demographic and collaborative method. **Content-based** method uses item-to-item similarity. If a user like B, we recommend A that is like B. **Association method** also uses item-to-item similarity. In this method, we do not decide whether they are similar or not. If items have high correlation with each other, we decide that they are similar. **Demographic method** and collaborative method use people-to-people similarity both. Demographic method needs actual features of people to decide whether they are similar. **Collaborative method** uses correlation between users.

Recommendation System is a comprehensive and complicated task which involves various tastes of users. Therefore, lots of techniques for recommendation have been proposed to solve the problems. As the amount of information in the world is increasing very quickly, we need techniques to find relevant information efficiently. One of such technique is to use a **recommendation system** and the **collaborative filtering** is one of the most promising methods.

Collaborative filtering is a method of making automatic predictions about the interests of a user by collecting taste information from many users. The underlying assumption of this approach is that those who agreed in the past tend to agree again in the future. I personally prefer Collaborative Filtering as it is more accurate and precise. I even created a recommendation system based on Collaborative Filtering Method.