Collaborative Filtering

It is a technique used to generate product/service recommendation to a user based on the preferences of other users with similar attitude. So, lets assume that you have decided to buy a car, then this method analyses your behavior and matches it with other users with similar interest, then recommend a car that those users like since you have same interest as others.

It analyses your behavior, then it matches it with other users with same interest, then recommend you a product that others liked due to similar taste. If you want to buy a car then the system will recommend a car based on other people who has the same taste as you and bought that car in the past. So, if you have a similar taste as your cousin then chances are that you buy another product that your cousin bought in the past, so if your cousin liked the product, then you will like it as well because you share same interest or are like minded.

From Textbook:

Collaborative Filtering is a technique used to make automatic predictions about the preference of a user derived by analyzing the preferences of other users that have similar interests. The underlined characteristic of this type of filtering is that if a person A has the same preference as person B, therefore, person A will be more likely to like another service/product that person B likes comparing to a random customer.

It can further split into six main categories

* model-based,
* memory-based,
* clustering based,
* matrix and tensor factorization,
* deep learning, and
* hybrid method.

Memory-Based Collaborative Filtering

This Model uses statistical relationship such as correlation related to user’s rating to make recommendations. This approach uses the entire dataset to successfully recommend items.

Two types:

* User Based
* Item Based