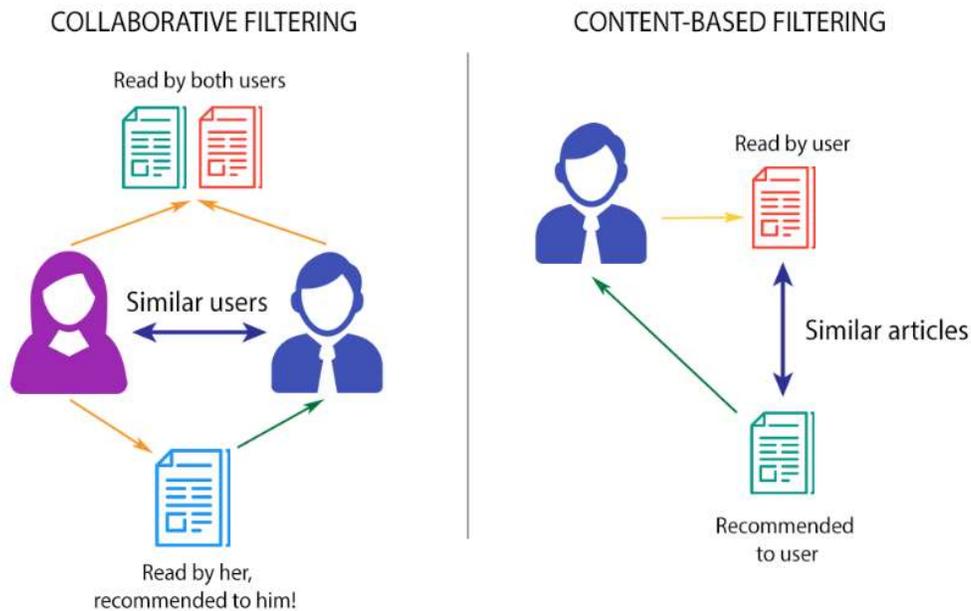


Recommender system

OptiValueRecommender is a state-of-art product universal filtering system which can be used for multi-purpose and in various domains. Recommender systems have become increasingly popular in recent years, and are utilized in a variety of areas including movies, music, news, books, research articles, search queries, social tags, and products in general which can significantly boost revenues, CTRs, conversions, and other important metrics. Moreover, they can have positive effects on the user experience as well, which translates into metrics that are harder to measure but are nonetheless of much importance to online businesses, such as customer satisfaction and retention.

Our framework is an amalgamation of three different recommendation types

- Collaborative filtering
This filtering method is usually based on collecting and analyzing information on user's behaviors, their activities or preferences and predicts what they will like based on the similarity with other users. Collaborative filtering is based on the assumption that people who agreed in the past will agree in the future, and that they will like similar kinds of items as they liked in the past.
- Content-Based Filtering
These filtering methods are based on the description of an item and a profile of the user's preferred choices. Here, algorithms try to recommend products which are similar to the ones that a user has liked in the past.



- Hybrid Recommendation Systems

Combining collaborative and content-based recommendation can be more effective and more accurate. Hybrid approach is implemented by making content-based and collaborative-based predictions separately and then combining them

- Context-aware recommender systems

Personalized Recommender systems based on present state of the user considering location, time, weather etc., We can build context aware recommendations as a three-dimensional problem

Recommendations = User x Item x Context

- Model Based Recommender Systems
- This involves building a model based on dataset of ratings. This helps build a scalable model with high performance compared to memory based Recommender systems. Techniques like Matrix Factorization, KNN and Deep Learning models are used to build these systems