

Building Recommendation System

In today's world, information is everywhere. It has a ton of advantages, but it does not mean that it comes with zero cost. On the contrary, information overload is a serious problem as consumers can feel overwhelmed and either decide not to buy anything or do not take all options into account. To remedy this problem, a big food company for which you are working as data scientist wants to develop a recommendation system (RS) to provide better service to its customers.

RS can be defined as a system that makes personalized recommendations from a large range of different options by implicitly or explicitly eliciting the user's preference for a product. RS benefits consumers as they reduce consumers' effort and search costs by making the decision process quick, easier, and painless.

As a data scientist at a big food company, you are asked to run item. Basically, user-based recommendation is a technique used to predict the items that a user might like based on ratings given to that item by the other users who have similar taste with that of the target user.

For this task, you are provided 'recom.csv' dataset. In this dataset, you have following columns:

- Main_ID (Customer ID)
- Transaction_ID
- Date
- Price
- Code_Product
- Amount (Order Amount)
- ItemKey

Well, using this data, you are asked to generate a dataframe in which you recommend an item (or items) for each user.

Hints:

- 1) Please note that there is no rating in the dataset, but, no worries, there is a way to solve this problem.
- 2) If possible, please recommend multiple items per user.
- 3) You can consider creating pivot table with 'Main_ID', 'ItemKey', 'Transaction_ID'.