

CONTENT-BASED OR COLLABORATIVE FILTERING?

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Content-based Recommender

A content-based recommender learns the item features to which a user is affined.

In this case, take user age, gender, average historical spend on product as user features.

Take item description embeddings as item features.

Based on item content, we can predict the corresponding potential users.

Interaction	*
User Features	Indicator (Age, Gender, Average Historical Spend on Product)
User Representation	Linear
Item Features	Metadata (Item Description Embeddings)
Item Representation	None
Prediction	Dot-product
Learning	*

Comparison with Collaborative Filtering

Pros: 1) When new item released, content-based method can be used while CF cannot.
2) Good for cold start cases. 3) Tend to match more personal needs

Cons: 1) Easily trapped in local optimum.
2) Slower than CF.

As for the company Emadri, it seems the traveling advice is more personal driven. And taking the cold start problem into account, I suppose content-based version is preferred. In general, we should combine both.