

Assignment - Recommender Systems Taxonomy
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1. Analysis of Recommendation Systems

1.1 Spotify

Spotify is a widely used music streaming platform that offers various recommendation methods depending on user interaction.

Before Interaction (Non-Personalized Recommendations)

Spotify provides general popularity-based recommendations. Suggested content includes globally trending artists, region-based popular playlists (Top Charts in Switzerland), and featured radio stations. The system uses demographic filtering to suggest popular music based on the user's location.

After Interaction (Personalized Recommendations)

Once a user starts playing specific music genres (rap,trap music), Spotify shifts to personalized recommendations. Content-based filtering is applied by suggesting songs from the same artist or similar genres. Collaborative filtering is used to recommend music based on other users with similar listening habits. A dedicated personalized section appears on the homepage with customized music recommendations.

Spotify Recommendation System Taxonomy		
Category	Before Interaction	After Interaction
Domain	Music, news, popular playlists	Personalized playlists and song recommendations
Purpose of Recommendation	Engage users with trending content	Enhance user experience with tailored recommendations
Recommendation Context	Browsing the homepage	Active music listening
Whose Opinion?	General audience trends	Users with similar listening behaviors
Personalization Level	Generic, Demographic	Ephemeral & Persistent
Privacy & Trustworthiness	Low risk	Medium risk (user activity is tracked)
Interfaces	Curated playlists, trending lists	"For You," "Similar Artists" sections
Recommendation Algorithm	Non-personalized (popularity-based)	Content-based filtering, Collaborative filtering

1.2 IMDb

IMDb is a popular movie and TV show database that provides different types of recommendations.

Before Interaction (Non-Personalized Recommendations)

IMDb suggests trending content using simple recommendation models such as Top 10 most-watched movies and TV shows of the week, fan favorites (collaborative filtering approach), most popular celebrities (ranked by weekly score changes), and streaming recommendations for Netflix, Prime Video, etc.

After Interaction (Personalized Recommendations)

When a user searches for a specific genre (science fiction, action), IMDb starts providing personalized recommendations. Content-based filtering suggests movies from the same director or production house. A dedicated recommendation section is created on the homepage based on the user's search behavior.

IMDb Recommendation System Taxonomy		
Category	Before Interaction	After Interaction
Domain	Movies, TV shows, celebrities, streaming platforms	Personalized movie & TV show suggestions
Purpose of Recommendation	Highlight trending content	Provide tailored suggestions based on user activity
Recommendation Context	General browsing	Searching for specific genres or movies
Whose Opinion?	General user base, fan rankings	Users with similar preferences, content-based matching
Personalization Level	Generic	Ephemeral & Persistent
Privacy & Trustworthiness	Low risk	Medium risk (search history used for recommendations)
Interfaces	Trending lists, celebrity rankings	Personalized recommendation sections
Recommendation Algorithm	Non-personalized (trending lists)	Content-based filtering, Collaborative filtering

1.3 eBay

eBay is an e-commerce platform that utilizes recommendation systems to enhance user shopping experiences.

Before Interaction (Non-Personalized Recommendations)

The homepage displays popular product categories. Recommendations are region-based, showing trending products in the user's country. There is no personalization at this stage; recommendations are solely popularity-driven.

After Interaction (Personalized Recommendations)

When a user searches for or views products, eBay begins showing personalized recommendations. A "Recently Viewed" section appears, listing previously explored products. Advertisements dynamically adjust to include products related to the user's browsing history. Content-based filtering and association rule mining (product relationships) are used to suggest items similar to previously viewed products.

eBay Recommendation System Taxonomy		
Category	Before Interaction	After Interaction
Domain	E-commerce, product recommendations	Personalized product suggestions
Purpose of Recommendation	Highlight trending products	Increase sales by recommending relevant items
Recommendation Context	Browsing homepage	Searching for specific products
Whose Opinion?	General shopping trends	Individual user preferences
Personalization Level	Generic, Demographic	Ephemeral & Persistent
Privacy & Trustworthiness	Low risk	Medium risk (browsing history is tracked)
Interfaces	Trending lists, category-based suggestions	"Recently Viewed" section, personalized ads
Recommendation Algorithm	Non-personalized (trending products)	Content-based filtering, Association Rule Mining