Recommendation Systems

Artificial Intelligence Applications

(Case-studies)

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Full Course Outline:

- Recommendation Systems (RS) Basics

- Recommendation Systems (RS) Types
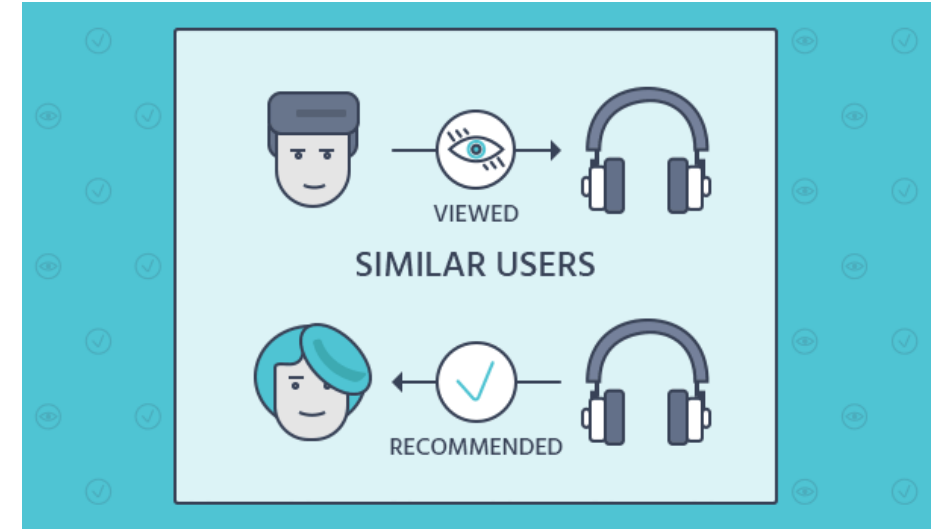
- Recommendation Systems (RS) Applications

Recommendation Systems (RS)

"Personal beauty is a greater recommendation than any letter of reference." ~ Aristotle

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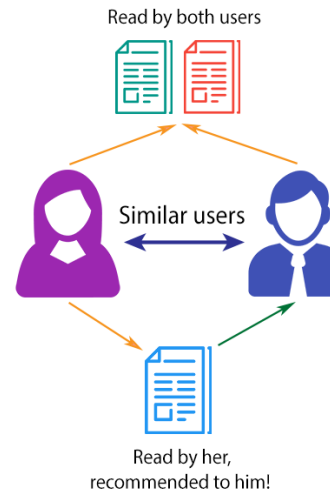
Recommendation Systems (RS) Basics

- **What?**
  - A **recommendation system** is a class of machine learning that uses data to help predict, narrow down, and find what people are looking for among an exponentially growing number of options.

- **Benefits:**
  - Benefits users in finding items of their interest.
  - Help item providers in delivering their items to the right user.
  - Identity products that are most relevant to users.
  - Personalized content.
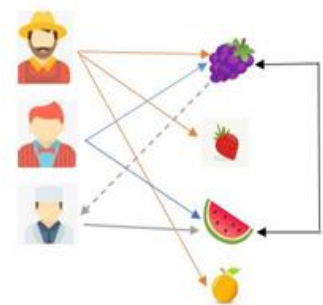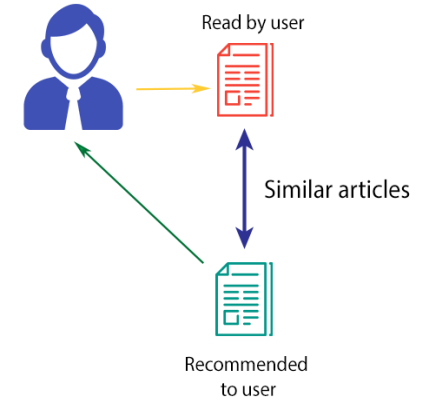 - Help websites to improve user engagement.

Recommendation Systems (RS) Types

- **Popularity-based Systems** (Non-Personalized)

- **Content-based Systems**
  - It is based on the available "**features**", that explain the observed user-item interactions.

- **Collaborative Systems**
  - It uses similarity of user preference behavior, given previous interactions between users and items.
    - User-User (User-based) Collaborative Filtering
    - Item-Item (Item-based) Collaborative Filtering

- **Hybrid Systems**


COLLABORATIVE FILTERING

Read by both users

Similar users

Read by her, recommended to him!
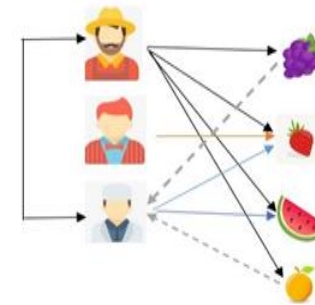
CONTENT-BASED FILTERING

Read by user

Similar articles

Recommended to user

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Recommendation Systems (RS) Applications

- E-Commerce & Retail: Personalized Merchandising (Amazon)
- Media & Entertainment: Personalized Content (Netflix)
- Personalized Banking
- People / Jobs (LinkedIn)
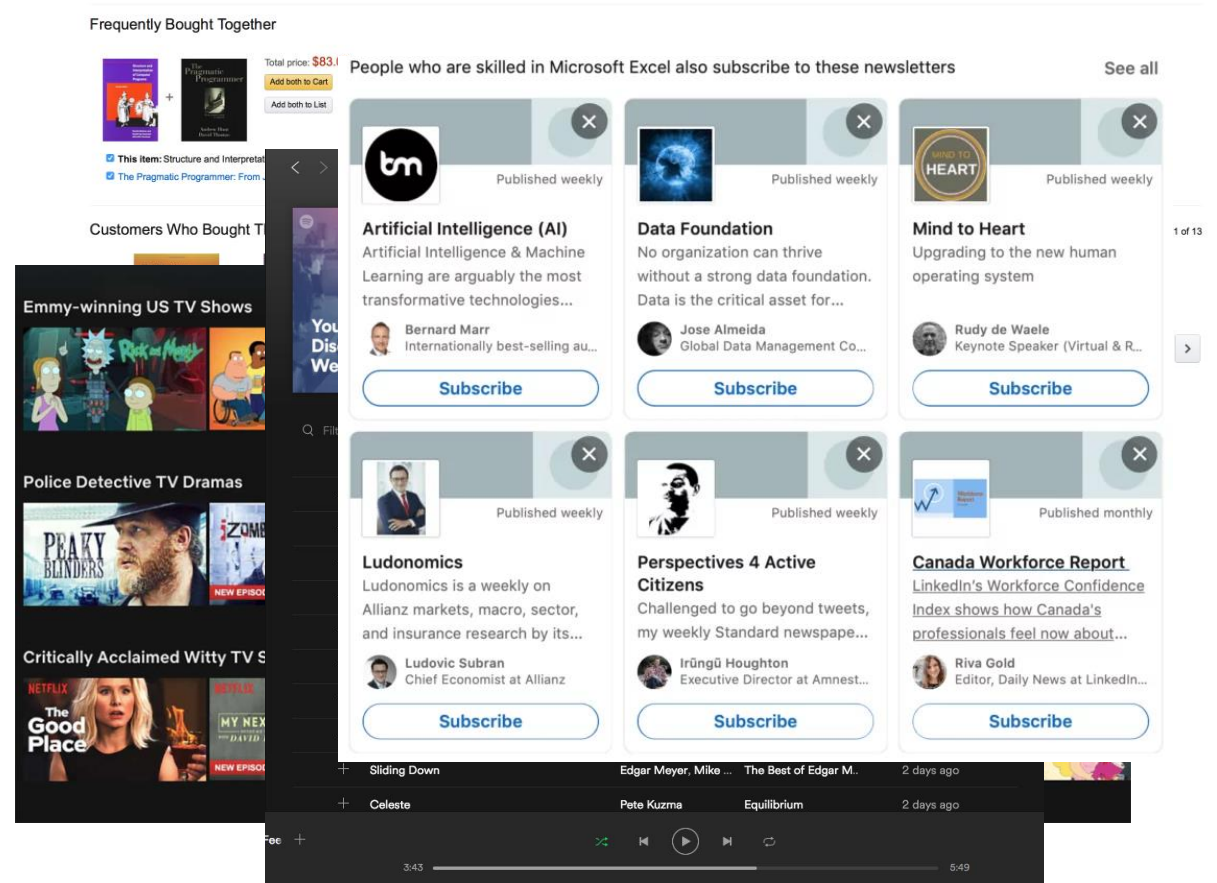
THANKS

Keep Moving Forward! ☺

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