# What are recommender systems?

Recommender systems capture the pattern of peoples' behavior and use it **to predict what else they might want or like**.

# Applications

- What to buy?
  - E-commerce, books, movies, beer, shoes
- Where to eat?
- Which job to apply to?
- Who you should be friends with?
  - LinkedIn, Facebook, ...
- Personalize your experience on the web
  - News platforms, news personalization

# Advantages of recommender systems

- Broader exposure

- Possibility of continual usage or purchase of products
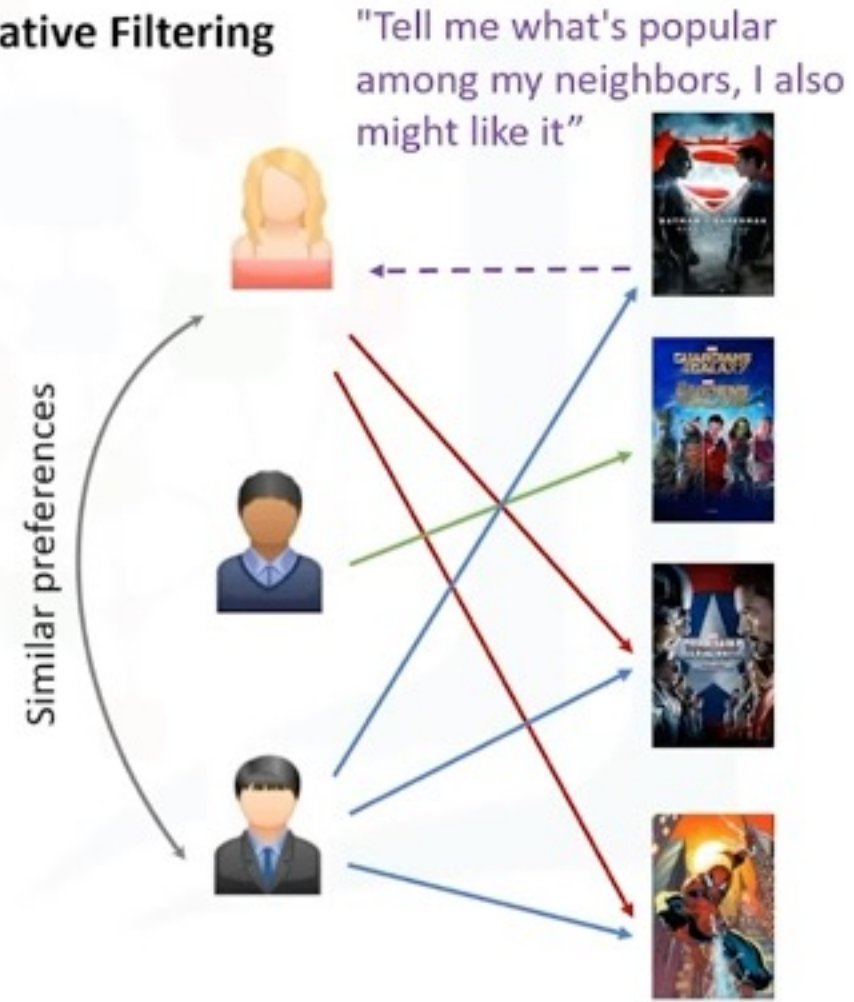
- Provides better experience

IBM **Developer**

SKILLS NETWORK

# Two types of recommender systems

**Content-Based**

**Collaborative Filtering**

"Tell me what's popular among my neighbors, I also might like it"

"Show me more of the same of what I've liked before"

Similar items

Similar preferences

# Implementing recommender systems

- Memory-based
  - Uses the entire user-item dataset to generate a recommendation
  - Uses statistical techniques to approximate users or items
    e.g., Pearson Correlation, Cosine Similarity, Euclidean Distance, etc.

- Model-based
  - Develops a model of users in an attempt to learn their preferences
  - Models can be created using Machine Learning techniques like regression, clustering, classification, etc.