

# A hybrid approach for news recommender system using optimization methods

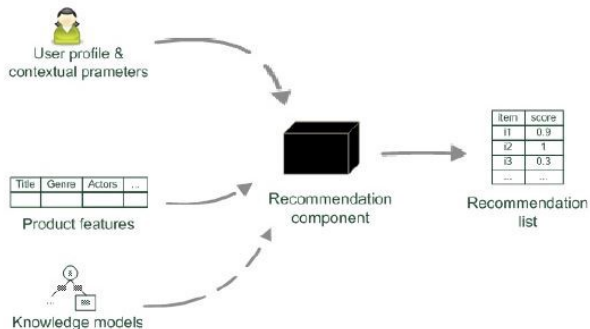
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# Introduction

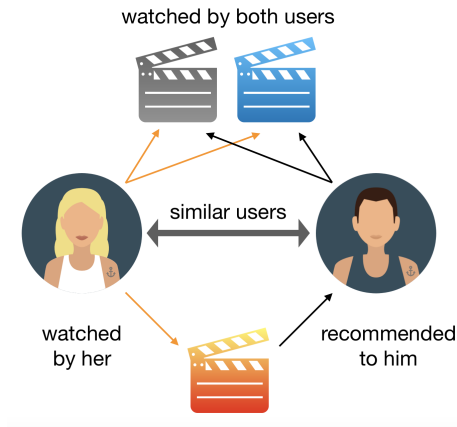
- ▶ Many approaches
  - ▶ Content-based
  - ▶ Collaborative

# Content-based approach



**Knowledge-based:** *Tell me what fits based on my needs*

# Collaborative approach



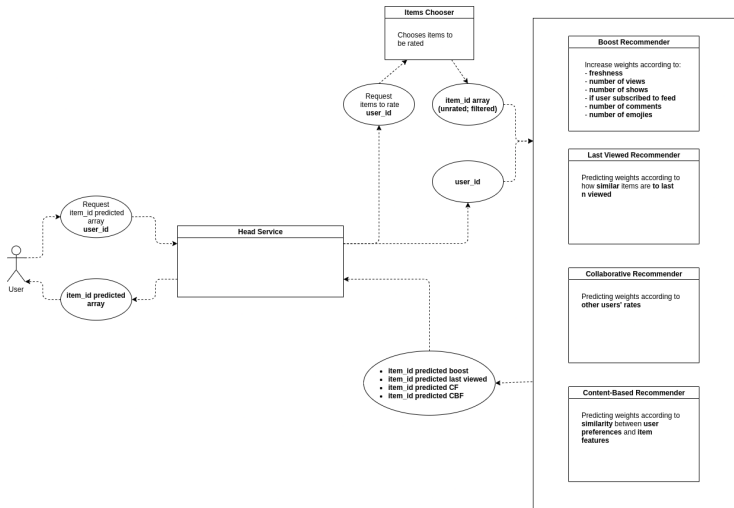
# Goal

- ▶ Scalable hybrid news recommender system
- ▶ Use as many information as possible
  - ▶ users' logs
    - ▶ likes
    - ▶ comments
    - ▶ views
    - ▶ shows
    - ▶ etc
  - ▶ news' features
    - ▶ source
    - ▶ popularity
    - ▶ theme
    - ▶ etc

# Solution

- ▶ Hybrid recommender
  - ▶ Collaborative recommender
  - ▶ Content-based recommender
  - ▶ Last Viewed recommender
  - ▶ Boost recommender
- ▶ Optimize weights

# Diagram



# Difficulties

- ▶ Many approaches to every recommender
  - ▶ A / B testing
- ▶ Many candidates (candidate generation)
- ▶ High load