SNS COLLEGE OF TECHNOLOGY

Coimbatore - 35

23BAT613 – Artificial Intelligence for Managers

Unit II – Unboxing ML & Its Applications

Presented by

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Design Thinker

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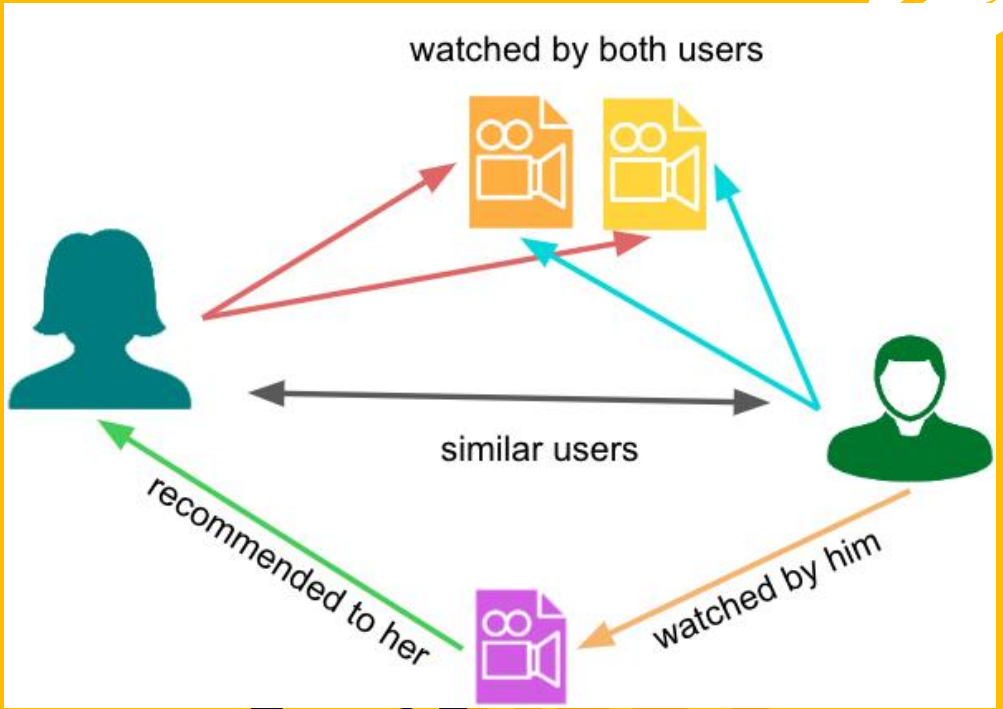
Guess the Topic!!!

Recommendation Technique



Recap

- Reason to study Ensemble Technique
- Ensemble Technique
- Ensemble Technique – types
- Bootstrap Algorithm
- Boosting Algorithm
- Stacking Algorithm

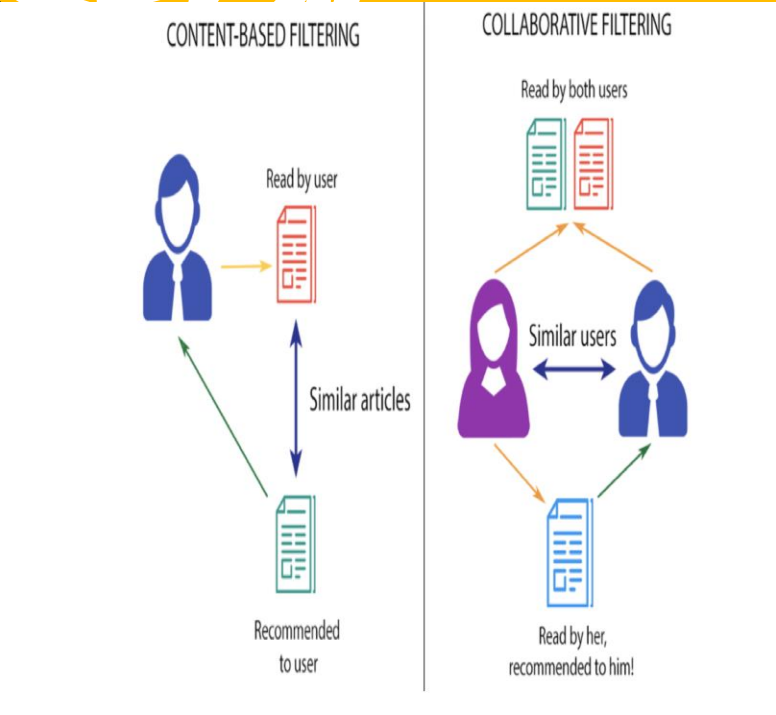
Discussion about….

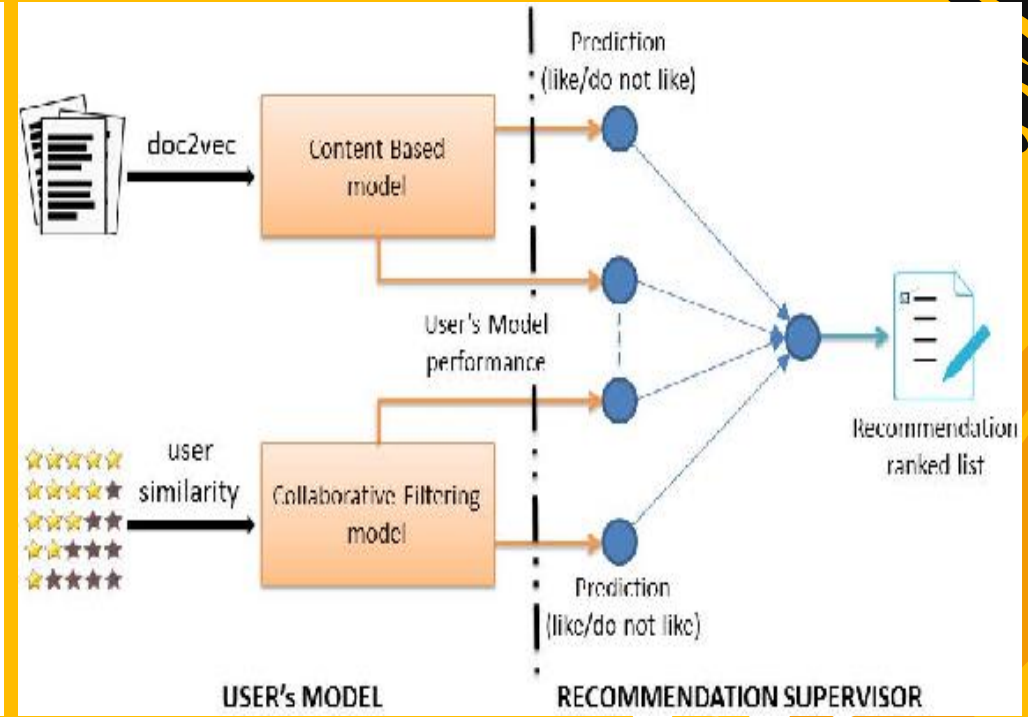
Reason to study Recommendation System

- Recommendation System & type
- Collaborative vs Content based
- Architecture
- Example

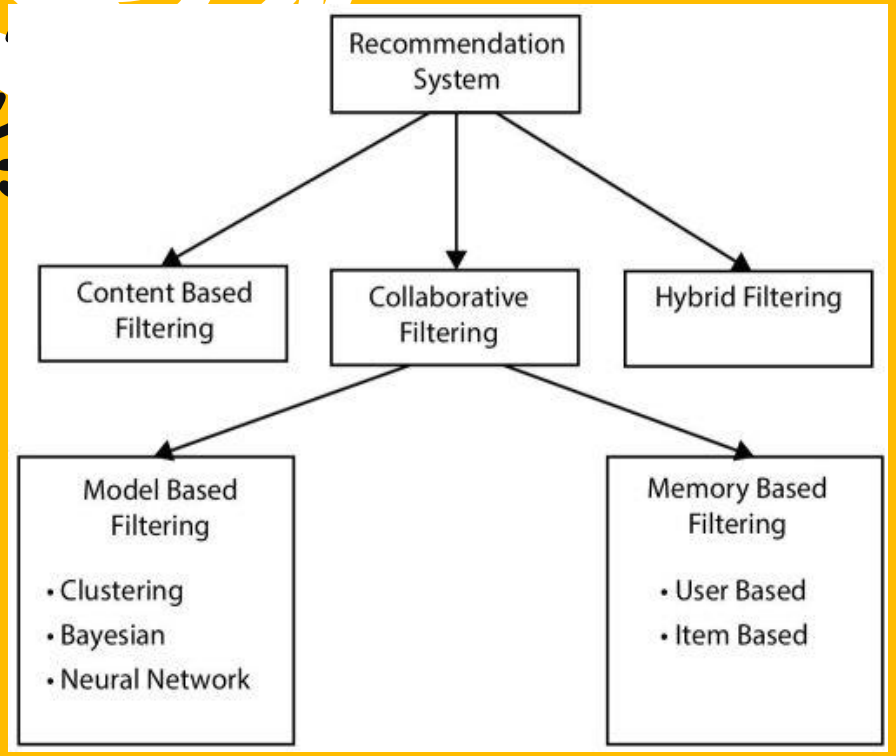
Reason to study Recommendation System in Machine Learning

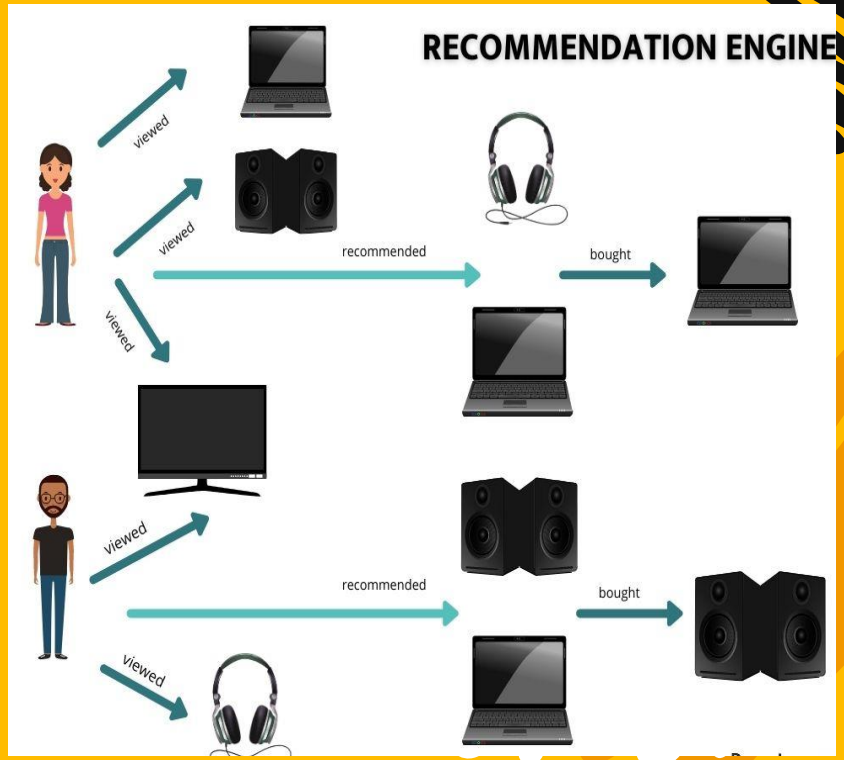
Recommendation System -Types





Recommendation System





Content-based vs Collaborative Filtering

Content-Based

- Use items metadata / tags
- Suggest items similar to what user liked in the past

Recommended

MORE LIKE
Billie Eilish

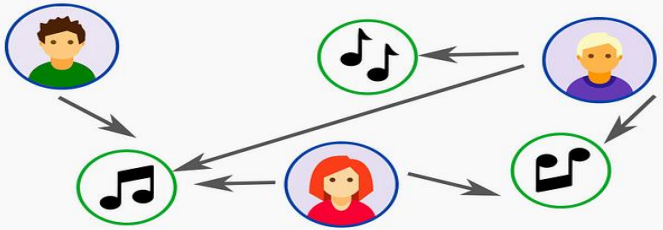
American Teen
Khalid

Reflection
Fifth Harmony

Lo Vas A Olvidar
Rosalía

Collaborative Filtering

- Use all feedbacks from all users
- Similiar users like similar items



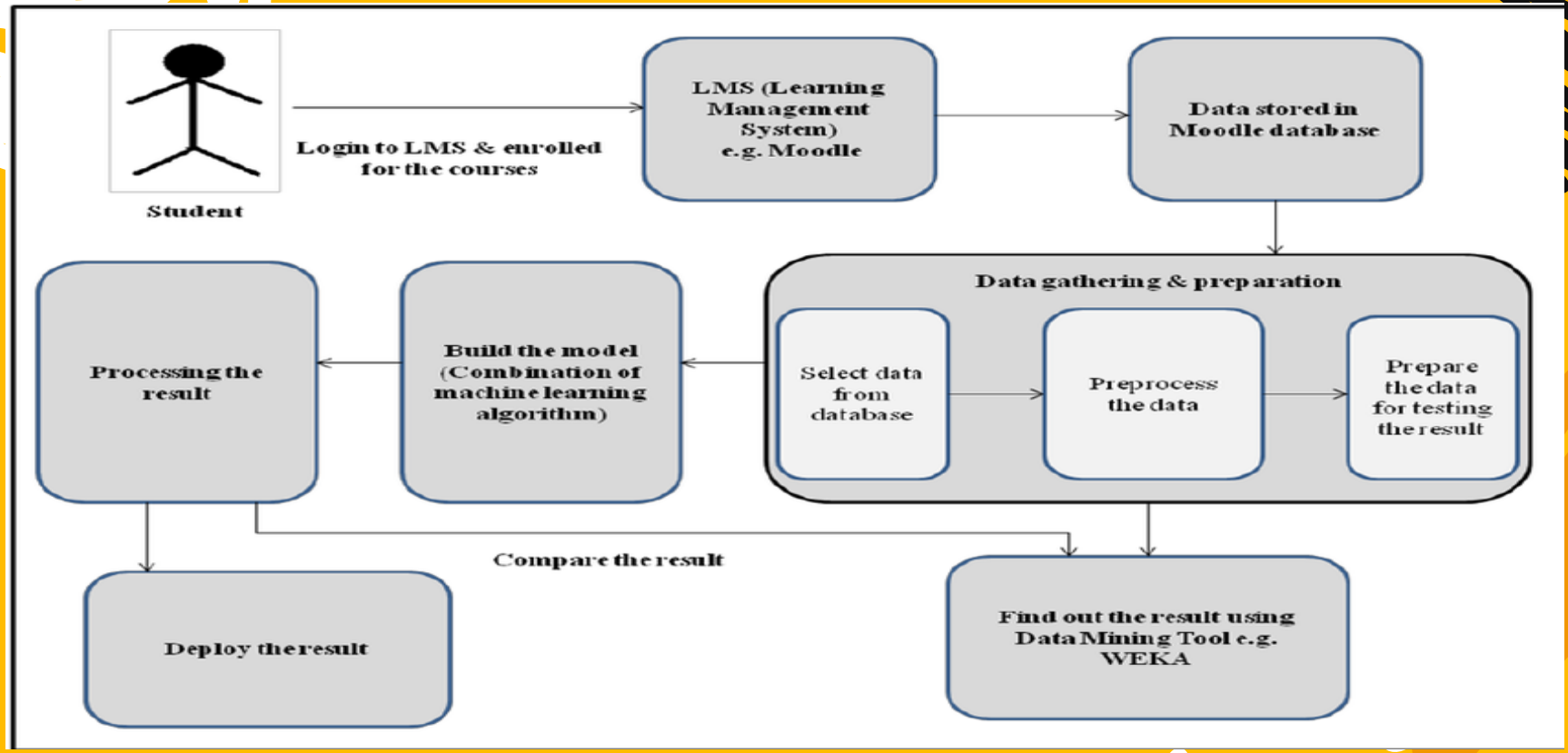
Recommended

Made For You

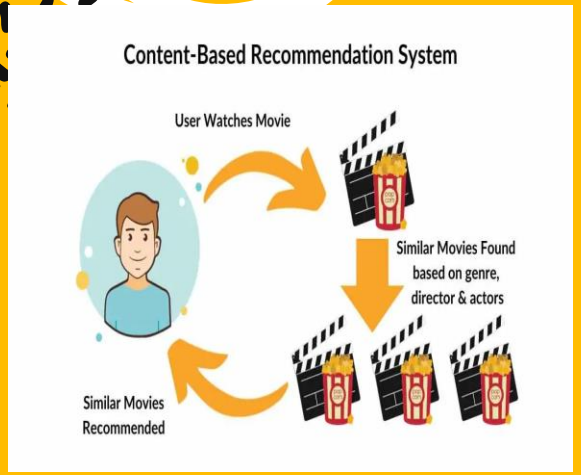
Discover Weekly
Enjoy new discoveries chosen just for you!

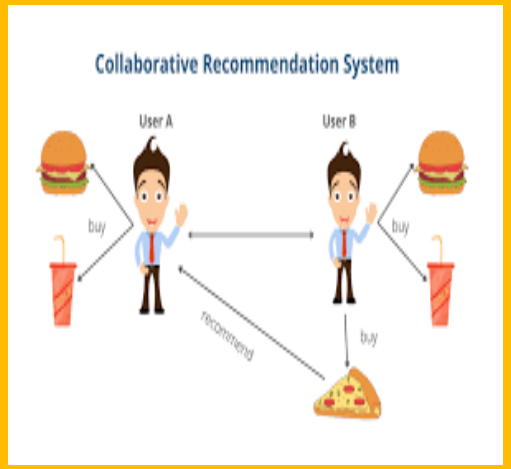
Your Daily Drive
Fans like you also like these songs!

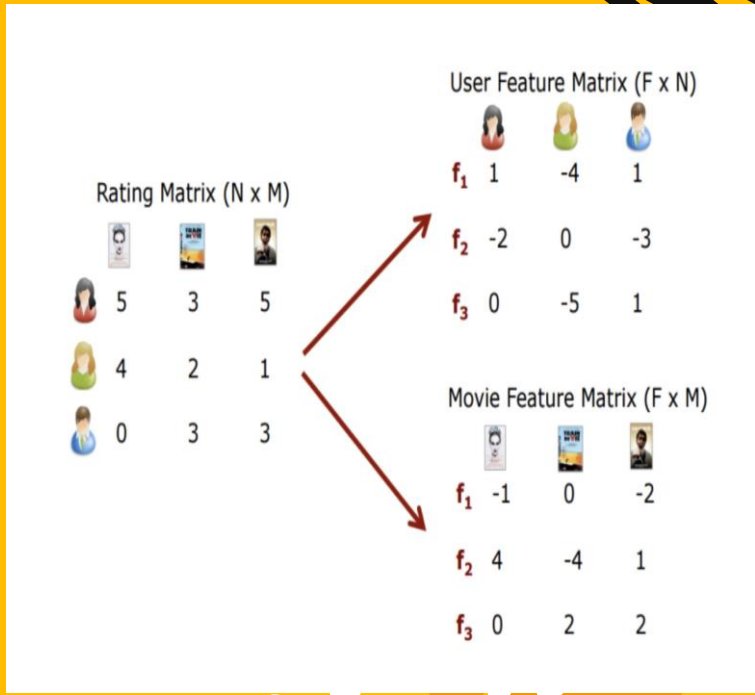
Recommendation System -Architecture



Example


Content-Based Recommendation System
User Watches Movie
Similar Movies Found based on genre, director & actors
Similar Movies Recommended


Collaborative Recommendation System
User A
User B
buy
buy
recommend
buy


Rating Matrix (N x M)
5 3 5
4 2 1
0 3 3
User Feature Matrix (F x N)
f1 1 -4 1
f2 -2 0 -3
f3 0 -5 1
Movie Feature Matrix (F x M)
f1 -1 0 -2
f2 4 -4 1
f3 0 2 2

Knowledge Check

Which technique in recommendation systems is based on the idea of identifying users with similar preferences and recommending items that one user's similar users have liked?

✗ a) Content-based filtering
b) Collaborative filtering
c) Hybrid filtering
d) Association rule mining

✗ **Answer: b) Collaborative filtering**

Summary

- Reason to study Recommendation System
- Recommendation System & type
- Collaborative vs Content based
- Architecture
- Example

References

- https://towardsdatascience.com/recommender-systems-a-complete-guide-to-machine-learning-models-96d3f94ea748

Thanks!

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