# ARTIFICIAL INTELLIGENCE IN RECOMMENDER SYSTEMS

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Recommender systems have become an important role for the industry to give personalized recommendations for the users. Recommendations can be given by utilizing explicit or implicit feedback from the users. With the increase in real world data, the implementation of recommender systems began to develop from using only simple applications (such as using content information or matrix factorization) to building recommender systems with the help of AI. In this poster, you will get the knowledge about simple application of recommender systems and state-of-the-art research in recommender systems domain.

CONTENT-BASED VS COLLABORATIVE

Collaborative filtering focusing more on user-item interaction while Content-based filtering focusing more on the attribute of the items to give recommendations.
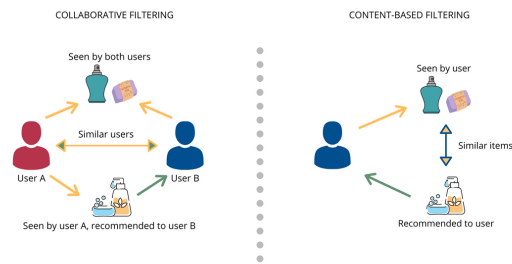

OTHER APPLICATIONS

Hybrid recommender systems
The hybrid method can also be implemented in recommender systems by combining content-based filtering and collaborative filtering.

Context aware recommender systems
Recommender systems also could use context information in addition to user-item interactions to enhance user personalization. For example, recommender systems below use season information in addition to user-item interactions.
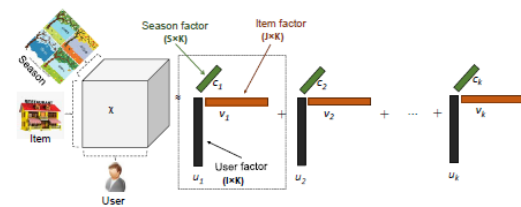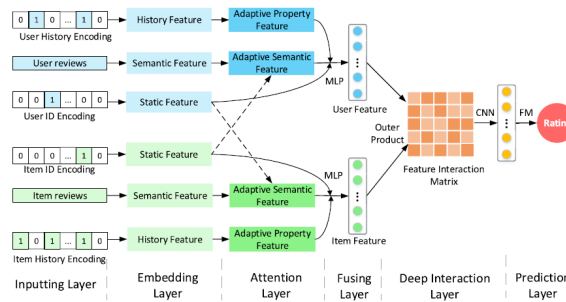

REFERENCES
bit.ly/AISummitRef

STATE-OF-THE-ART

Attention-Based

Attention mechanism can be used in recommender systems to choose the importance of each features between different users. The use of attention mechanism can make recommender systems give more personalized recommendations to each users.

GAN-Based

Most of recommender systems have data sparsity problem, especially in e-commerce that sell millions of products. To tackle this problem, Generative adversarial network can be used to generate latent representation of user-item interaction which can help to reducing the data sparsity problem.

Aspect-Based

Aspect-based recommender systems give recommendations based on each aspects of a product. For example, if a product is a restaurant, then the aspects can be taste, ambience, service and etc. This kind of recommender systems will provide overall rating predictiion and rating prediction from each aspects which can help to give more personalized recommendations to each users.

CONCLUSION

Research work in the area of recommender systems has increased in the last decade. Researchers have tried to give more personalized recommendation to the users using some state-of-the-art methods like three methods that have been mentions above. This poster is aims to give introduction of recommender systems methods and how artificial intelligence can be implemented to improve the performance of recommender systems.
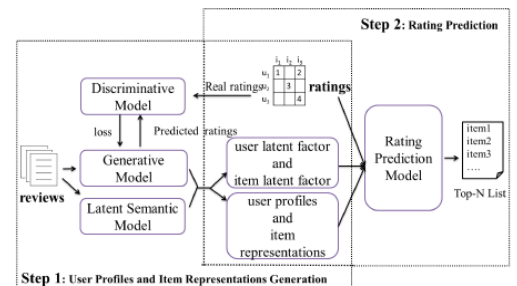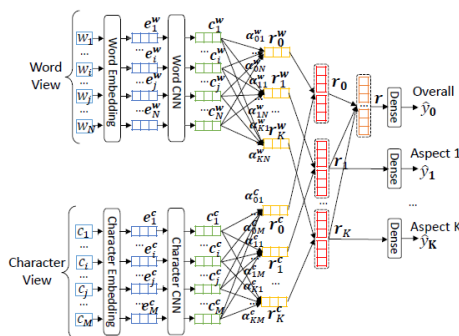
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