

[1] Paolo Montuschi et.al (2015) proposed the work related to Recommendation which are made on the basis of explicit information or implicit information. Being based on past ratings or actions, such systems risk recommending items that are too similar to those the user previously considered. Moreover, content must be expressed in a format that enables automatic processing.

Advantage

- It can manage both labelled and unlabelled content.
- It hides the complexity derived from the use of semantics by providing a simple interface suitable for nonskilled users.
- It could be theoretically used in different contexts because it relies on a general ontology.

Disdvantage:

- At present, the system can't identify proficiency levels for learning outcomes

[2] Wenbo Chen et.al(2018) proposed the work An online mining and predicting system are proposed for personalized job or candidate recommendation with big-data support. It considers the users' explicit information as context to achieve personalized recommendation. Furthermore, a tree-based method is introduced to address large-volume items by effectively analyzing them in cluster level and thus reduce the computational load.

Advantage:

Expandingly Tree-based and Dynamically Context-aware Online Learning algorithm (ETDC). In ETDC, formulate users' context space based on their explicit information and extract their reward (satisfaction) from their implicit information

Disdvantage

The exposure of users' context may result in the divulgence of their sensitive information, the future work will focus on how to diminish the possibly privacy leakage in the recommendation system in professional social network.

[3] Shigang Hu et.al(2020) proposed an work based on Likes and dislikes and it is a very tricky task even for humans, making its automation a very complex job. The reviewer credibility analysis and fine-grained feature sentiment analysis to devise a robust recommendation methodology. The proposed credibility, interest and sentiment enhanced recommendation (CISER) model has five modules namely candidate feature extraction, reviewer credibility analysis, user interest mining, candidate feature sentiment assignment and recommendation module.

Advantage:

The proposed CISER model recommends products with commendable accuracy, without the need of collecting and processing alternative data from social networks, surveys etc.

Disadvantage:

social network information and online activity logs can be used to enhance the user credibility model and build shopping cliques for product recommendation.

[4] Mohammed E. Ibrahim et.al (2018) A personalized recommendation system can be an effective way of suggesting the relevant courses to the prospective students. This paper approach that personalizes course recommendations that will match the individual needs of users. This approach aims to integrate the information from multiple sources based on the hierarchical ontology similarity with a view to enhancing the efficiency and the user satisfaction and to provide students with appropriate recommendations. The quality of the recommendations is improved when the ontology similarity between the items and the user's profiles were utilized.

Advantage:

overcoming the problem of information overloading, and helps the students to find relevant and useful courses from a large number of online course resources that are available on the internet.

Disadvantage:

There is no feedback information from students for effective courses and improve the student model based on students' feedback and consider more aspects and techniques related to recommender systems.

[5] [Muhammad Zaman Fakhar](#) et.al (2022) The exponential increase in energy demands continuously causes high price energy tariffs for domestic and commercial consumers. Proposed a novel off-peak scheduling technique that provides instant energy scheduling recommendations by monitoring appliances in real-time following user-devised criteria. This technique utilizes appliance energy consumption data, user-devised criteria, and energy price signals to identify the recommendation points.

Advantage:

- presents an off-peak scheduling technique to reduce energy costs by monitoring smart home appliances.
- It monitors appliances in real-time in contrast to other existing techniques and targets appliances with high energy usage during mid-peak and peak hours for scheduling.

Disadvantage:

User responses to instant recommendations, the calculation of exact waiting time and the peak-to-average ratio are not achievable.

[6] Huansheng Ning et.al (2019) Friend recommendation system (FRS) is an essential part of any social network system. However, most of them are homophily based systems, homophily is the propensity to associate and bond with similar others. In other words, these systems will recommend people that you share common features with them as friends. We present and evaluate an FRS based on the big-five personality traits model and hybrid filtering, in which the friend recommended process is based on personality traits and users' harmony rating.

Advantage:

- personality traits measurement was done through questionnaires.
- The effectiveness of PersoNet was evaluated based on the recommendations accuracy that was validated by the users' rating.

Disadvantage:

Many aspects that could improve the effectiveness of Personet have not been discussed

[7] Sahraoui Dhelim et.al (2020) A recommendation system is an integral part of any modern online shopping or social network platform. The product recommendation system as a typical example of the legacy recommendation systems suffers from two major drawbacks: recommendation redundancy and unpredictability. In this article, Meta-Interest, a personality-aware product recommendation system based on user interest mining and Metapath discovery. Experimental results show that this method can increase the precision and recall of the recommendation system.

Advantage:

The proposed system uses big-five to model the user's personality.

Disadvantage:

The proposed system could be further improved by integrating a knowledge graph and infer topic-item association using semantic reasoning.

[8] Yang Han et.al (2020) Based on the advantages of Internet of things, this paper focuses on the research of intelligent recommendation model for cancer patients' rehabilitation and designs a user-friendly intelligent recommendation system of cancer rehabilitation scheme. The recurrence time as the objective function and established the recommendation model of the optimal nutrition support program for the rehabilitation by using BAS algorithm. Finally, under the framework of Internet of things technology, the intelligent recommendation model of cancer rehabilitation prediction model and nutrition support program was integrated to realize the recommendation system of intelligent recommendation of rehabilitation nutrition support program for cancer rehabilitation patients according to their different characteristics.

Advantage:

The CNN algorithm and the BAS algorithm are coupled under the framework of the Internet of Things technology and embedded into the intelligent recommendation system.

Disadvantage:

It can be improved in the research of cancer rehabilitation recommendation scheme, combining with more advanced mathematical models, to find the best scheme for cancer patients.

Proposed Work:

In this assignment the first thing we are focusing is on the front-end part which includes creating and designing the user's page that allows them to login and register using their credentials. The next thing that we have planned is creating the database and then we are connecting the database with the frontend part using flask. The techstack we are using here are HTML,CSS,JAVASCRIPT. The backend that we are using here is python.

References:

- [1] Montuschi, P., Lamberti, F., Gatteschi, V. and Demartini, C., 2015. A semantic recommender system for adaptive learning. IT Professional, 17(5), pp.50-58.
- [2] Chen, W., Zhou, P., Dong, S., Gong, S., Hu, M., Wang, K. and Wu, D., 2018. Tree-based contextual learning for online job or candidate recommendation with big data support in professional social networks. IEEE Access, 6, pp.77725-77739.
- [3] Hu, S., Kumar, A., Al-Turjman, F., Gupta, S. and Seth, S., 2020. Reviewer credibility and sentiment analysis based user profile modelling for online product recommendation. IEEE Access, 8, pp.26172-26189.
- [4] Ibrahim, M.E., Yang, Y., Ndzi, D.L., Yang, G. and Al-Maliki, M., 2018. Ontology-based personalized course recommendation framework. IEEE Access, 7, pp.5180-5199.
- [5] Fakhar, M.Z., Yalcin, E. and Bilge, A., 2022. IESR: Instant Energy Scheduling Recommendations for Cost Saving in Smart Homes. IEEE Access, 10, pp.52178-52195.

- [6] Ning, H., Dhelim, S. and Aung, N., 2019. PersoNet: Friend recommendation system based on big-five personality traits and hybrid filtering. *IEEE Transactions on Computational Social Systems*, 6(3), pp.394-402.
- [7] Dhelim, S., Ning, H., Aung, N., Huang, R. and Ma, J., 2020. Personality-aware product recommendation system based on user interests mining and metapath discovery. *IEEE Transactions on Computational Social Systems*, 8(1), pp.86-98.
- [8] Han, Y., Han, Z., Wu, J., Yu, Y., Gao, S., Hua, D. and Yang, A., 2020. Artificial intelligence recommendation system of cancer rehabilitation scheme based on IoT technology. *IEEE Access*, 8, pp.44924-44935.