Abstract

The design of recommender systems for various domains has been proposed based on the nature inspired algorithms. In this paper attempt is made to propose a Nature Inspired Algorithms based architecture for recommender system for web based learning environments. The paper also compares between the traditional recommender systems and the nature inspired algorithm recommender systems. Collaborative filtering is proposed for personalized recommendations; user and item attributes are used as filtration parameter. Attributes and rating of the user’s similarity is used for collaborative filtering process. Hybrid collaborative filtering is proposed for user and item attribute that can alleviate the sparsity issue in the recommender systems. Traditional systems are studied in detail and all the possible limitations of the traditional systems are bought under attention.

References

- Prakash, Lakshmi Sunil, Dinesh Kumar Saini, and Narayana Swamy Kutti. "Integrating EduLearn learning content management system (LCMS) with cooperating learning object repositories (LORs) in a peer to peer (P2P) architectural framework." ACM SIGSOFT Software Engineering Notes 34. 3 (2009): 1-
- D. Teodorovic, and M. Dell"aposs;Orco, "Bee Colony Optimization - A Cooperative Learning Approach to Complex Transportation Problems." Advanced OR and AI Methods in Transportation, pp. 51-60, 2005
- S. Nakrani, and C. Tovey, "On Honey Bees and Dynamic Allocation in an Internet Server Colony." Proceedings of 2nd International Workshop on the Mathematics and Algorithms of Social Insects, Atlanta, Georgia, USA, 2004

**Index Terms**

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