Abstract

The World Wide Web is a source of knowledge; the knowledge is extracted from the web data. Web data is available in direct from normal web as contents to user and/or in direct forms to as the web access logs. For the web usage pattern analysis the web access logs are analysed. Web usage data used in various applications of web masters, user data recommendations, web pre-fetching and caching. In this paper using the web access log analysis, web next page recommendation system is introduced. The presented technique involves data personalization, user behavioural analysis and access patterns for recommendations.

The proposed web page recommendation system contains the K-means algorithm for finding similar access patterns of the user sessions. Additionally for classification and prediction the KNN algorithm is implemented. The model also incorporate the similar user access pattern data which is belongs from the other user therefore the proposed model also predicts the rarely accessed patterns. Thus to make the recommendations web usages data is personalized,
based on URL frequencies, user navigational frequencies, session based data analysis and
time based data analysis. Additionally to combine these parameters a weighted technique is
used.

The proposed recommendation system is implemented using JAVA technology. And their
performance in terms of accuracy, error rate, space complexity and time complexity is
estimated. The experimentation with increasing amount of data provides more accurate results
and also consumes less computational resources. Therefore the proposed data model is
adoptable for accuracy and efficiency both.

References

1. Lina Yao and Quan Z. Sheng, Aviv Segev, Jian Yu, “Recommending Web Services via
   Combining Collaborative Filtering with Content-based Features”, 2013 IEEE 20th International
   Conference on Web Services, 978-0-7695-5025-1/13 $26.00 © 2013 IEEE
2. Rana Forsati, Mohammad Reza Meybodi, Afsaneh Rahbar, “An Efficient Algorithm for
   Systems and Applications
   2011 3rd International Conference on Electronics Computer Technology (ICECT 2011),
   978-1-4244-8679-3/$26.00 2011 IEEE
   Proceedings of IS CET 2010.
5. Quanyin Zhu, Hong Zhou, Yunyang Yan, Jin Qian and Pei Zhou, “Commodities Price
   Dynamic Trend Analysis Based on Web Mining”, 2011 Third International Conference on
7. Busa V. R. R. Nagarjuna, Akula Ratna babu, Miriyala Markandeyulu, A. S. K. Ratnam,
   Computing and Engineering (IJSCIE), ISSN: 2231-2307, Volume-2, Issue-3, July 2012
8. Sneha Prakash, “Web Personalization using web usage mining: applications, Pros and
   Cons, Future”, International Journal of Computing Science and Information Technology, 2015,
   Vol.3,Iss.3, 18-26
   Session Construction”, Global Journal of Computer Science and Technology: E Network, Web
   & Security Volume 15 Issue 3 Version 1.0 Year 2015
10. D.A. Adeniyi, Z. Wei, Y. Yongquan, “Automated web usage data mining and
    recommendation system using K-Nearest Neighbor (KNN) classification method”, Saudi
    Computer Society, King Saud University, Applied Computing and Informatics, 2015 Production
    and hosting by Elsevier B.V
11. Haidong Zhong, Shaozhong Zhang, Yanling Wang, Shifeng Weng and Yonggang Shu,
    “Mining Users' Similarity from Moving Trajectories for Mobile Ecommerce Recommendation”,
    recommender system to disseminate information in a University Digital Library”, Information


Index Terms
Computer Science
Information Sciences

Keywords
Web usages mining, recommendation, next web page prediction, implementation, results analysis