Design a Recommender System for Personalization of Online Content

Steffina.T[1], Sivananaitha Perumal.S[2]

P.G Scholar, Department of IT, Dr. Sivanthi Aditanar College of Engineering, Tiruchendur, India[1]

Professor, Department of IT, Dr. Sivanthi Aditanar College of Engineering, Tiruchendur, India[2]

Abstract*:* Rapid growth of internet becomes a medium to deliver digital content. Digital content providers provide web users a wide range of modules. To attract more users to various content modules on the Web portal, it is necessary to design a recommender system that can effectively achieve online content optimization by automatically estimating content items' attractiveness and relevance to users' interests. User interaction plays a vital role in building effective content optimization, as both implicit user feedbacks and explicit user ratings on the recommended items form the basis for designing and learning recommendation models. In particular, we propose an approach to leverage historical user activity to build behavior-driven user segmentation; then, we introduce an approach for interpreting users' actions from the factors of both user engagement and position bias to achieve unbiased estimation of content attractiveness. Our experiments on the large-scale data from a commercial Web recommender system demonstrate that recommendation models with user action interpretation can reach significant improvement in terms of online content optimization over the baseline method. The effectiveness of user action interpretation is also proved by the online test results on real user traffic.

Keywords*:* Action interpretation, content optimization, personalization, recommender systems, Behaviour-driven user-segmentation