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Exploiting Search History of Users for News Personalization

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Abstract

Content personalization is a long-standing problem for online news services. In most personalization approaches users of a news service are represented by topical interest profiles that are matched with news articles in order to properly decide which articles are to be recommended. When constructing user profiles, existing personalization methods exploit the user activity observed within the news service itself without incorporating additional information that can be obtained from other sources.

In this paper we study the problem of news personalization by leveraging usage information that is external to the news service. We propose a novel approach that relies on the concept of “search profiles”, which are user profiles that are built based on the past interactions of the user with a web search engine. We extensively test our proposal on real-world datasets obtained from Yahoo. We explore various dimensions and granularities at which search profiles can be built. Experimental results show that, compared to a basic strategy that does not exploit the search activity of users, our approach is able to boost the clicks on news articles shown at the top positions of a ranked result list.

Keywords: Online news, personalization, user profiling, query logs

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