



Personalized News Recommendation with Context Trees

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The profusion of online news articles makes it difficult to find interesting articles, a problem that can be assuaged by using a recommender system to bring the most relevant news stories to readers. However, news recommendation is challenging because the most relevant articles are often new content seen by few users. In addition, they are subject to trends and preference changes over time, and in many cases we do not have sufficient information to profile the reader.

In this paper, we introduce a class of news recommendation systems based on context trees. They can provide high-quality news recommendation to anonymous visitors based on present browsing behaviour. We show that context-tree recommender systems provide good prediction accuracy and recommendation novelty, and they are sufficiently flexible to capture the unique properties of news articles.

Subjects: **Information Retrieval (cs.IR)**; Learning (cs.LG); Machine Learning (stat.ML)

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