Do Recommendations Matter? – News Recommendation IRL

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Abstract

We investigate how users interact with news recommendations, and their click behavior may vary dependent on the news domain. We analyze 10 days of interaction logs containing news readers (users), news items (articles), recommendations (articles) and clicks (successful recommendations).

The data used in our analysis contains in excess of 80 million reader interactions (e.g. reading an article and clicking a recommended article) on 480 thousand articles for a total of 6 recommendation algorithms, 2 of which are analyzed here.

News Recommendation in the Wild

Real-time, real-world news article recommendation in 16 German news providers, in the scope of the 2013 "News Recommendation Challenge".
Analysis based on

- 4 news providers
  (traditional news and topic-focused news)
- 2 recommendation algorithms
  (most recent and document similarity)
- 10 days of user interactions

Traditional news vs. topic-focused news

For the sake of the analysis, four news providers were selected

Traditional news
- Sport 1 - www.sport1.de
- Tagesspiegel - www.tagesspiegel.de

Topic-focused news
- Motor Talk - www.motor-talk.de
- Computerwoche - www.computerwoche.de

Sport1 and Tagesspiegel are among Germany's largest daily websites for sports and general news.
Motor Talk and Computerwoche serve smaller audiences and focus on automotive and IT/Business respectively.

Recommendation algorithms

Two recommendation algorithms were used for suggesting news to readers:

Recent Recommender
This recommender pushed the most recent news articles available on each website to readers of the respective website. The more recent the article, the higher the probability of it being presented to the user as a recommendation.
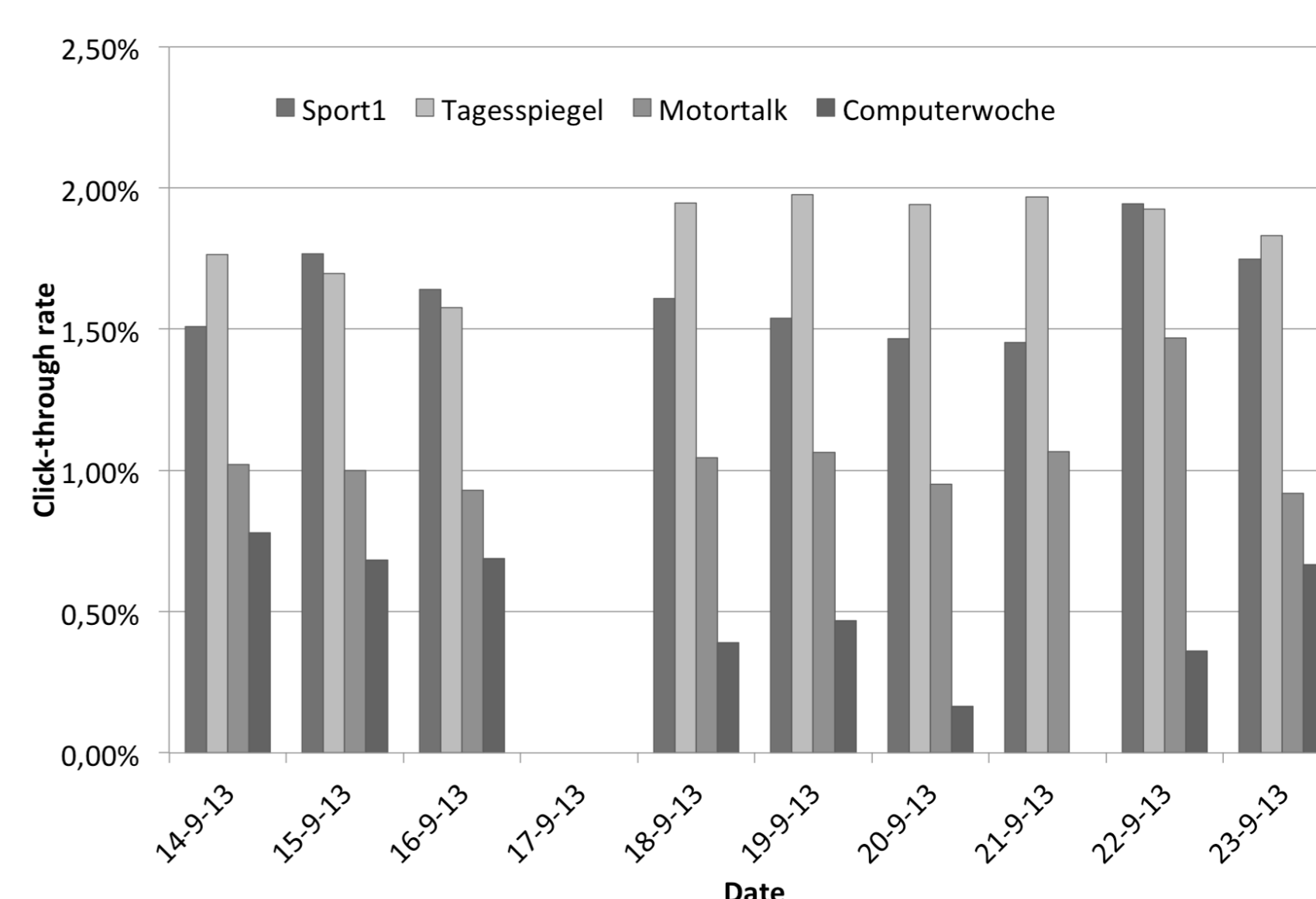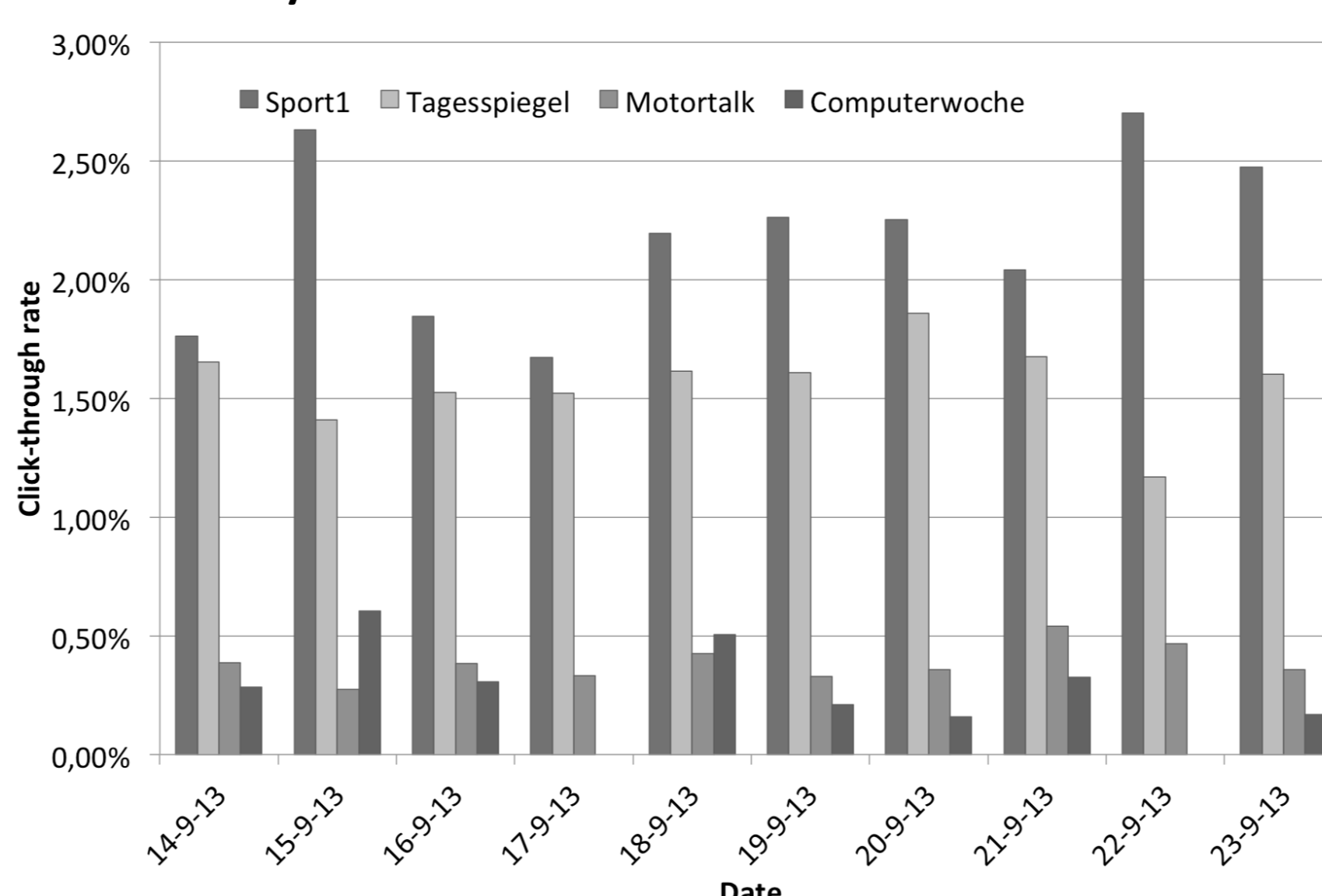
Document Similarity Recommender
This recommendation algorithm indexed the title and preamble of each news article in order to find similar articles. The most similar article to the one being viewed by the user was pushed as a recommendation.

News Recommendation

Results

The figure on the right shows the Click-through rate (CTR) for the document-similarity recommender. It can easily be seen that the traditional news outlets (Sport1 & Tagesspiegel) receive a higher amount of clicks on the delivered recommendations. Readers of Motortalk and Computerwoche were more than 30% less likely to click on a recommendation.

The figure on the left shows the CTR for the recency-based recommender. Consistent with the document-similarity results, readers of Motor Talk and Computerwoche were less likely to click on recommendations.

Further Reading

A Month in the Life of a Production News Recommender System
A. Said et al. In LivingLab 2013

2013 News Recommendation Challenge

Poster Abstract
Do Recommendations Matter? – News Recommendation IRL
A. Said et al. in CSCW 2014

Conclusions & Future Work

We have analyzed the interactions of news readers with recommendations over the course of 10 days. Our analysis suggests that readers of traditional news domains (newspapers, sports) are more receptive to recommendations than those reading articles on news outlets focused on a specific topic. We are continuing our analysis of different news domains and their sensitivity to different types of recommendation approaches.

Acknowledgement

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