

Report on the 4th Workshop on Context-awareness in Retrieval and Recommendation (CaRR 2014)

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Abstract

Context-aware information is widely available in various ways and is becoming more and more important for enhancing retrieval performance and recommendation results. The current main issue to cope with is not only recommending or retrieving the most relevant items and content, but defining them *ad hoc*. Other relevant issues include personalizing and adapting the information and the way it is displayed to the user's current situation and interests.

The workshop on Context-awareness in Retrieval and Recommendation is a forum for research on context-awareness in information retrieval, recommender systems and human computer interaction. The fourth iteration of the workshop was organized in conjunction to the 36th European Conference on Information Retrieval in Amsterdam, The Netherlands.

1 Introduction

A core topic in Information Retrieval and Recommender Systems, context-awareness is addressed by a significant number of research papers, projects, etc. on a yearly basis, making up a significant share of the technical program at conferences such as ECIR, RecSys, SIGIR, CHI, MobileHCI and related events. Context-awareness is a recognized methodology for improving the quality of information access and personalization systems and there exists a large number of systematic and algorithmic variations of these methods. There is however also a large variety in what is considered as context, this is also one of the key foci of this series of workshops, i.e. an attempt at formalizing not context itself, but rather the terminology used throughout the field.

In the scope of the CaRR workshop series (CaRR 2014 [8], CaRR 2013 [1], CaRR 2012 [2] and CaRR 2011 [3]), we have discussed the role of context referring to the personalization of information. Context is generally referred to as different factors surrounding the user, the information object (or item), or the system. The location of the information interaction, the weather at the time of the interaction, or the users mood are examples of context that

have been presented and discussed during the CaRR Workshop Series. With CaRR, we aimed to invite the community to a discussion in order to find new creative ways to support context-awareness and exchange ideas between different communities.

The workshop took place on April 13th 2014 as a full-day workshop in conjunction with ECIR'14 in Amsterdam, The Netherlands. The schedule included one keynote presentation, followed by a set of paper presentations, and a concluding panel discussion on context-aware retrieval and recommender systems. The workshop proceedings are available in the ACM DL¹.

In the remainder of this report, we provide further details about the different parts of the workshop and end with a brief discussion on the future of the topic.

2 Keynote

The workshop keynote was given by David Elsweiler from the University of Regensburg. The keynote, titled "*Behaviour with Search and Recommender Systems: what can it tell us?*" [4], covered users' interactions with point of interest recommendation systems in different contexts (location, interests, etc.) as well as users' behavioral changes during the interaction with such systems.

3 Paper Presentations

There were four paper presentations during the workshop covering topics ranging from location- and mobility-related context to contextual datasets and factorization algorithms for continuous context modeling.

The presented papers were:

- *B. Lamche, U. Trottman, W. Woendl* – Active Learning Strategies for Exploratory Mobile Recommender Systems [6]
- *M. Sappelli, S. Verberne, S. Koldijk, W. Kraaij* – Collecting a dataset of information behaviour in Context [9]
- *S. Mizzaro, M. Pavan, I. Scagnetto, I. Zanello* – A Context-Aware Retrieval System for Mobile Applications [7]
- *B. Hidasi, D. Tikk* - Approximate Modeling of Continuous Context in Factorization Algorithms [5]

4 Panel Session

After the presentations, the workshop continued with a fishbowl panel session where all workshop attendees were invited to participate. The mixed background of the participants (research and industry, as well as various research topics), generated a very active and inter-active discussion. The topics focused on the difference between search and recommendation. After a lengthy discussion, there was an agreement on a general difference in usage purpose between the two. Even though techniques and concepts such as scoring and ranking are used

¹<http://dl.acm.org/citation.cfm?id=2601301>

in both retrieval and recommendation, the usage is generally different. Other topics covered were when personalization and contextualization should be used, how to avoid getting stuck in the filter bubble, and in what cases these can actually be harmful instead of useful.

5 Conclusion

The 2014 CaRR workshop was the first in the series to be organized at a core IR conference, which reflected on the panel discussions and - to some extent - on the participants. The discussions at this event tended to go into more technical details than on the workshop editions organized at ACM IUI (2011 and 2012 editions).

The workshop was successful in bringing people from the research community and industry together, and in discussing and addressing some important issues in the area, emphasizing the importance of contextualization, personalization and utility of retrieval and recommender systems.

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