Second International Workshop On the Evaluation of Collaborative Information Seeking and Retrieval (Ecol'17)

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ABSTRACT

The workshop on the evaluation of collaborative information retrieval and seeking (ECol) is held in conjunction with the ACM SIGIR Conference on Human Information Interaction & Retrieval (CHIIR) in Oslo, Norway. To make the workshop active and the participant pro-active, we released datasets and tools so as to help researchers contributing to the formalization of evaluation frameworks for challenging collaborative tasks. The workshop is split into two parts. First, a presentation session. Then, the afternoon is devoted to group discussion addressing challenges of evaluating and designing models for social and collaborative search.

Keywords

Collaborative information retrieval, social information retrieval, task, evaluation

1. INTRODUCTION

The paradigm of Collaborative Information Seeking (CIS) and Retrieval (CIR) refers to methodologies and technologies that support collective-knowledge sharing within a work team in order to solve a shared complex problem [5]. Accordingly, the main underlying challenge is to satisfy the mutual beneficial goals of both individual users and the collaborative group while maintaining a reasonable level of cognitive effort underlying users' interactions [11]. Indeed, collaborative search is also known as a social process [4] in which users leverage from other users' interactions and social signals (e.g., bookmarks and annotations). In the recent years, several studies [7, 16, 8] have been carried out to understand the behavioral process of users in terms of question asking on search engines vs. social networks. In this context, social platforms (e.g., social networks [9, 2] and community question-answering [6, 3]) have been acknowledged as a place where users collaborate to solve an information need. This provides numerous opportunities for new and novel research within the field of CIR/CIS where the gap between social and collaborative search can be brought together.

However, the evaluation for CIS/CIR and social & collaborative IR models are still challenging, as there are a variety of confounding factors such as the multi-user and multi-level contexts, the exploratory aspect of the search through multi-session search activities, the multiplicity of relevance factors, the individual vs. collective value of relevance, the search interfaces supporting the collaborative interactions as well as the social interactions themselves. While, substantial research advances in the evaluation of non-collaborative information retrieval and seeking tasks have been achieved through international evaluation campaigns such as TREC, CLEF and NTIR, to date and to our knowledge, no standardization effort has been achieved for the evaluation of CIS/CIR and social-CIR. During the first ECol Workshop there was strong consensus that there is an important need to investigate the evaluation challenge in CIS/CIR/social-CIR with the aim of creating common evaluation frameworks that would foster the research area.

A first edition of this workshop has been organized at CIKM 2015 in which we discussed about the issue of evaluation in CIS/CIR [14]. The second edition of the ECol Workshop[1] [14] focuses the discussion and provides concrete contributions in developing such an evaluation framework for the unique challenges in CIS/CIR and social-collaborative IR. To make the workshop active and the participant proactive, we release datasets and tools so as to help researchers contributing to the formalization of evaluation frameworks for challenging collaborative tasks (that we will identify).

Finally, we hope that this workshop will be beneficial for the community in both short- and long-term. First, this would allow to understand relevance factors or design standard evaluation frameworks. Second, provided resources (datasets, tool, and tasks) would remain available for the whole community, facilitating in the future comparable and reproducible experiments.

2. SCOPE AND NOVELTY OF THE WORKSHOP

These last years and particularly since 2005, CIS and CIR have became emerging topics that have been addressed in

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[1] https://www.irit.fr/ECol2015/

several IR and IS conferences including CIKM and SIGIR conferences [1, 14]. While the potential of collaboration has been highlighted with respect to individual settings, other challenges remain and need to be thoroughly explored. Despite most of experimental evaluations have been done with the objective of highlighting the synergic effect of the proposed contributions, there is an important need for the future to discuss about what should be evaluated in terms of collaboration aspects (e.g. cognitive effort, mutual beneficial goal satisfaction, collective relevance...). Moreover, it does not exist standard framework as proposed in ad-hoc information retrieval through the evaluation campaign, as those proposed by TREC, INEX, CLEF, etc.

While a follow on from our previous workshop, this workshop has two distinguishing and novel elements: (i) it has a specific focus on social IR and collaborative IR evaluation, bridging the gap within this space, and (ii) it provides datasets, tools and new tasks for participants and others to undertake evaluations and explore this space. We believe that formalizing evaluation frameworks for a such domain would lead researchers to investigate this research area and propose new social-collaborative models.

Participants will have different ways to participate to the workshop:

- Use the **provided** datasets/tools to propose an evaluation framework for the **identified** tasks.
- Use their **own** datasets/tools to propose an evaluation framework for the **identified** tasks.
- Use the **provided** datasets/tools to propose an evaluation framework for a task **they have identified**.
- Propose an evaluation framework **without** support of datasets/tools for a task **we/they have identified**.
- Designing **possible tasks** (with/without proposing models and evaluation frameworks) on provided or their own datasets.

This opens future research directions and would lead to the design of evaluation frameworks. This would also enable comparable contributions in terms of evaluation framework and constructive discussions throughout the workshop.

3. RELEASED DATASETS AND TOOLS

To make the workshop interactive and also in a long-term objective in the field, we share resources and tools:

- Datasets:
  - Social-based datasets: tweet collections about two crises, respectively the Ebola virus epidemic and the hurricane Sandy[2] [13, 15].
  - Collaborative search logs[3] [12].
- Tools:
  - Coagmento collaborative interface [10].
  - Open-source version of Coagmento for doing user-studies on github[4].

[2]https://figshare.com/collections/expac/3283118
[3]http://infoseeking.org/data.php#cis2010
[4]https://github.com/InfoSeeking/CoagmentoCollaboratory

4. EXAMPLES OF TOPICS

Taking into consideration the release of datasets and tools, we will propose different topics that would guide participants in their contributions. For each topic, participants would be invited either to design the task or formalize the evaluation framework (including metrics, datasets, ground truth, baselines, etc.). Below we list examples of topics:

- Recommending social collaborators (experts, answerers, sympathizers).
- Collaborative ranking on social platforms (criteria: federated, novelty, diversity, interactive, time consideration).
- Identifying impacting factors on search effectiveness (failure, success, struggling).
- Preserving data privacy through multi-level CIR.
- Exploratory search (knowledge acquisition, multifaceted search).
- Collaborative intent understanding.

5. INTENDED PROGRAM COMMITTEE

- Thilo Boehm, University Hagen - Germany
- Luanne Freund, University of British Columbia - USA
- Martin Halvey, University of Strathclyde - UK
- Preben Hansen, Stockholm University - Sweden
- Ryan Kelly, University of Bath - UK
- Simon Knight, University of Technology Sydney - Australia
- Stephann Makri, University of London - UK
- Jian-Yun Nie, University de Montreal - Canada
- Takehiro Yamamoto, Department of Social Informatics, Graduate School of Informatics, Kyoto University - Japan

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