1-1-2017

KidRec: Children & Recommender Systems: Workshop Co-Located with ACM Conference on Recommender Systems (RecSys 2017)

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ABSTRACT

The 1^{st} Workshop on Children and Recommender Systems (KidRec) is taking place in Como, Italy August 27^{th}, 2017 in conjunction with the ACM RecSys 2017 conference. The goals of the workshop are threefold: (1) discuss and identify issues related to recommender systems used by children including specific challenges and limitations, (2) discuss possible solutions to the identified challenges and plan for future research, and (3) build a community to directly work on these important issues.

CCS CONCEPTS

•Information systems → Recommender systems; •Social and professional topics → Children;

KEYWORDS

Children, recommender systems, technology for children

1 RATIONALE

Recommender systems have been studied for the past few decades [9, 10]. Recommendation strategies detailed in the literature [1, 2, 5] – for the most part – have been developed to serve traditional users: adult individuals who often offer explicit feedback, write reviews, or purchase items themselves.

Children's access to technology has dramatically increased in the past fifteen years [3, 8]. This includes children's access to and use of popular recommender systems when they search using websites such as Google or when they are recommended related content when they browse and watch videos on YouTube. While recommendation systems for adults have been studied for several years, recommendation systems for children are only recently beginning to be studied and are primarily limited to recommenders in education-related environments [6, 7]. When focused on this particular audience, the role of a recommendation system needs to be reformulated, as it is not sufficient for recommenders to identify items that match users' preferences and interests. Instead, it is imperative that they also explicitly consider their needs from multiple perspectives: educational, developmental, and engagement, to name a few.

Considering these particular needs opens a rich set of questions for the research community to answer:

- What are the benefits of child-specific recommendations?
- What role does personal history, age, developmental stage, or even curricular standards have in recommendation systems for children?
- What are the goals of recommendation systems for children: persuade, educate, guide, and support their well-being, or something else entirely?
- What are the ethical or privacy challenges associated with this type of recommendation?
- What are the domains in which recommendations make sense for children? Are they the same as for adults?
- How should we model personalization given that traditional mechanisms of explicit feedback, writing reviews, and purchasing items (directly) do not match this particular population whose literacy levels are growing and who generally do not directly have the ability to purchase items?
- Are their specifics concern, from the point of view of developing technology that should be considered?

In addition, the interests and needs of this population are rapidly evolving, as children are in formative stages of development and are still refining their interests as they get to know new things, and enhance their educational context.

Given the increasing use of technology by children, and the breadth of issues already identified, we feel it is necessary to bring this community together to work to build the community, collectively map out the field of recommendation systems for children, and to begin to address these issues together.

RecSys'17, Como, Italy.
 ISBN 978-1-4503-4652-8/17/08.
DOI: 10.1145/3109859.3109956

2 WORKSHOP DESCRIPTION

We offer below the goal, objectives and activities proposed for the workshop, as well as research communities that have a direct impact of the outcomes of the proposed meeting, in terms of shaping priorities for this emerging domain.

2.1 Goal

The goal of this interactive workshop is to congregate researchers and experts from multiple disciplines, in order to understand the ethical, pedagogical, and technical implications of designing and developing recommendation systems that can be of use for children, whether for leisure or educational activities.

2.2 Objectives

The main workshop objectives include sharing and discussing research and projects that reach beyond classic recommender techniques and discuss the many child related challenges of recommender systems.

2.3 Areas of Interest

Recommender systems for children relates to a variety of research communities, including:

- Technology for children
- Recommender algorithms for children
- Recommendation explanations, transparency,
- Expert-in-the-Loop (e.g., teacher, parent)
- Child-centered content domains (e.g., leisure, education)
- User Profiling
- Personalization
- Gamification
- Ethics
- Privacy
- Information Retrieval
- Human Computer Interaction
- Education

By inviting members from these varied communities and building a community of KidRec researchers, we foster a multidisciplinary perspective that can initiate a conversation of the challenges, limitations, and needs related to the design and development of recommendation systems that can be directly and widely adopted by children.

2.4 Activities

We aim to facilitate a highly participatory [4] workshop in which attendees can discuss the limitations and challenges of recommendation systems for children and identify possible solutions and avenues of research. We propose to accomplish this through an interactive format, including: community building exercises, informal interactions, facilitated group work, and short and position paper presentations.

3 ACCEPTED PAPERS

For this first meeting, we have accepted six submissions. The topics of the accepted papers are varied and come from researchers in informatics, human computer interaction, gaming, music, design, and visualization, to name a few.

The accepted papers will start the discussion on how aesthetic relevance influence the decision making process, when it comes to recommend multimedia items for children; how to enhance children's book recommendations; how attention patterns can bias the recommendation selection of items in the movie domain; how to tailor music recommendation for young children and adolescents; how to depend upon gaming to generate recommendation that promote vocabulary development; and, how to evaluate recommendations when it comes to children, given the lack of existing benchmarks.

The accepted paper presentations and following discussions, along with the interactive activitites the KidRec's organizing commitee has planned will help build community and start an important conversation on the needs, challenges, and limitations of recommendation systems designed to benefit children both through direct use, and that indirectly meet children's needs by guiding an adult to interact with children (e.g a teacher or a librarian).

4 OUTCOMES AND FUTURE

The primary benefit of this workshop will be to start to formally build a community of researchers who directly work with one another to address the particular needs of children with regards to recommender systems. We invite and welcome researchers from disparate research areas to openly acknowledge and work towards addressing the particular issues related to recommender systems that impact children.

ACKNOWLEDGMENTS

We would like to thank Program Committee members for their prompt and insightful reviews, which directly impacts the level of the workshop discussions. We also thank the Organizing Committee for RecSys 2017 for giving us the opportunity to host this workshop in conjunction with the main RecSys 2017 conference.

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