"This Will All Make Sense When I'm Older": Goals, Gaps, and the Road Ahead for Child-Aware IR

Keynote

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Abstract

Information Retrieval (IR) is at the core of information access systems that shape how children perceive the world and engage with digital media. Yet, these systems are rarely designed or evaluated with young users in mind; often exposing them to content that is misleading, inappropriate, or simply misaligned with their needs and developmental stages. Despite advances in IR (and AI), creating safe, effective, and age-appropriate digital experiences remains an open challenge. In this talk, we will explore how mainstream search and recommender algorithms influence children's online experiences and review current IR research aimed at addressing these gaps. We will examine how information access systems can be reimagined to better serve young users and reflect on the challenges IR researchers and practitioners face when considering underserved populations. Most importantly, we will focus on opportunities for innovation, the ethical implications of algorithmic design, and the responsibility to uphold children's rights and well-being in digital spaces.

Short bio

Dr Maria Soledad (Sole) Pera is an Associate Professor at the Web Information Systems group of the EEMCS faculty at TU Delft. Sole's research is in Information Retrieval, with a special emphasis on enhancing information access for underserved user groups. Sole's main area of expertise is in Information Retrieval with emphasis on non-traditional populations. Currently, her work centers on identifying the limitations and designing algorithmic support so that search and recommender systems can better serve all users, particularly children. Sole is a co-principal investigator on the SNSF-funded project "Scaffolding to foster independence when children search Online for Learning" (SOL). Sole regularly serves on the senior program committees of major conferences, including SIGIR, UMAP, RecSys, and ECIR. She is also a co-organizer of the KidRec and IR4U2 workshop series, co-located with IDC, ECIR, and SIGIR. Her service to the research community includes roles such as General Chair for RecSys'18 and IDC'23, as well as Program Chair for UMAP'23, CIKM'24, and RecSys'25.

Declaration on Generative AI

During the preparation of this work, the author did not use any AI tool.

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