ACM Journals

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ACM Transactions on Recommender Systems

Special Issue on Recommender Systems in Industry: Challenges and Solutions

Recommender systems are nowadays used across a variety of application settings, where they have shown to be able to deliver substantial values both for service providers and consumers. Given the high practical relevance of these systems, academic interest in this area has been constantly increasing over the years.

Historically, there have always been strong ties between industry and academia in this field. There are countless examples where organizations deploy recommendation models that were the result of academic research. Also, the usually large fraction of participants from the industry at the yearly ACM Conference on Recommender Systems provides strong evidence of the intense exchange between scholars from academia, and researchers and practitioners from industry.

Nonetheless, a certain gap between academic research and industrial needs seems to remain. Today, academic research is to a large extent focusing on developing general-purpose, domain-independent recommendation models, which are evaluated and benchmarked in data-based offline experiments. This development is in some ways only natural, as it is a common goal of academic scholars to develop generalizable solutions that not only work in one particular application setting. However, such an approach comes with the danger that academics rely on a research operationalization that is overly generic and potentially abstracts too much from the particularities of real-world problem settings.

With this special issue, we would like to shed light on recent progress and ongoing challenges of designing and implementing recommender systems in practical environments. As a consequence, the contributions in this issue should guide academic scholars toward a better understanding of important questions from the real world that still need to be addressed through fundamental academic research or through future academia-industry collaborations. In the end, we hope that the papers in this special issue will stimulate even more impactful academic research in the field of recommender systems.

Topics:

We aim to cover a wide spectrum of topics related to the design and use of recommender systems in practice. The topics of the special issue include (but are not limited to):

- Application and domain-specific challenges, solutions, and opportunities
- Case studies, best-practice reports, success and failure stories
- Collaboration reports between academia and industry
- Measuring business and consumer value, including multistakeholder considerations
- Addressing the offline and online evaluation gap
- Data engineering challenges relating, e.g., to data sparsity, data acquisition, data quality, data integration, or information pipeline design
- Architectures for large-scale recommender systems and scalability
- Addressing recommendation biases, temporal and seasonal effects
- Use of Large Language Models in real-world settings
- Privacy, security, transparency and regulatory challenges
- Identification of bots / fake user profiles
- User interface design challenges
- Organizational challenges, e.g., cross-team collaborations, competing stakeholder goals

Important Dates

- Submission deadline: December 1, 2024
- First-round review decisions: March 1, 2025
- Deadline for revision submissions: May 1, 2025
- Notification of final decisions: July 1, 2025

Submission Information

While there is no technical page limit, we expect that most industry reports published in this special issue are about 10-20 pages in length in the ACM submission format, and thus shorter than typical technical journal contributions. Correspondingly, we do not necessarily expect a detailed technical exposition or novel technical contributions in industry reports. Instead, we expect that the papers in this special issue report on real-world challenges and solutions, to further narrow the gap between academic research and industrial practice.

Significantly extended versions of previously published "Industry track" conference papers are welcome. Please contact the editors when in doubt.

Submissions must be prepared according to the TORS submission guidelines (https://dl.acm.org/journal/tors/author-guidelines) and must be submitted via Manuscript Central (https://mc.manuscriptcentral.com/tors).

We advise authors to obtain company approval, if needed, in advance of submission.

For questions and further information, please contact the editors at tors-eics@acm.org.