Report on the 11th International Workshop on News Recommendation and Analytics (INRA 2023) at ACM RecSys 2023

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Abstract

News remains a challenging domain for personalization. INRA'23 allowed experts and practitioners to get together and discuss recent trends and future directions. Peer review selected six contributions for presentation covering a wide array of topics including beyond accuracy evaluation, the use of large language models, misinformation, and emotions in news.

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1 Motivation

Democratic decision making relies on a functioning news eco-system. Citizens need to have access to information about recent events and their implications. News organizations used to print newspapers covering a set of stories and features other information. In the modern, digital age, digital social network sites, mobile devices, and AI shape news consumption. News organizations have invested into personalization with the vision to present readers with exactly the content they are looking for, thus reducing the time necessary to stay informed. These data-driven systems complement the editorial work.

On the other hand, AI has opened up the opportunities for accidental misinformation and deliberate disinformation. This raises a multitude of ethical questions. How should the ownership of data be regulated? Should AI use be subject to legal restrictions? How much transparency is required to maintain public's trust in media?

Researchers and practitioners need a venue to discuss the technical progress and these questions. The eleventh International Workshop on News Recommendation and Analytics provides

the venue. INRA'23 was co-located with ACM RecSys in Singapore. The venue enabled many experts to attend and engage in discussions with speakers and each other.

2 Theme and Topics

Personalization and AI have started affecting many aspects of the modern news eco-system. INRA serves as a venue to exchange ideas and discuss different facets of this eco-system. Recently, Large Language Models have allowed publishers to further automate news publication. Topics of interest for this year's edition of INRA included but were not limited to:

- News Personalization
  - Context-awareness
  - Social Media
  - Multimodality
  - User behavior and modeling
  - Data mining
  - User Interfaces
  - Diversity and beyond accuracy
- News Analytics
  - Semantics and ontologies
  - Summarization
  - Opinion mining
  - Social Graphs
  - Big data technologies
- Psychological, Societal, and Ethical Aspects
  - Privacy
  - Clickbait, fake news, and misinformation
  - Bias
  - Transparency and explainability
- Generative AI
  - Large Language Models
  - Automated Content Generation

3 Contributions

INRA'23 received nine submissions. After a thorough peer review, six submissions were accepted for oral presentation:

- Alaqabawy et al. [2023] conducted an interview study with journalists. The study explored how journalists perceive the current news eco-system features a set of data-driven elements such as news recommender systems. The authors argue for a multi-stakeholder perspective of news personalization, which would increase transparency and allow for more control in news ranking.

- Li et al. [2023] investigate the potential of ChatGPT as news ranker. They check how well the generative AI ranks news, how fairly it treats different providers, and how much potential it has to generate misinformation. The evaluation reports that using JSON-formatted input improves the ranking over plain text. The authors observe a publisher bias.
- Iana et al. [2023] present a bilingual collection of news about migration. They emphasize the need for beyond accuracy evaluation in the news domain. The news collection features sentiment labels and the authors disambiguated entities with the help of Wikidata. In addition, the data resource features domain-specific knowledge graphs.
- Knudsen et al. [2023] explore the value of different features in determining users' preferences toward news. They define seven features—headline, reading time, recency, geographic distance, topic match, demographics, and popularity—and distribute the study to 1,664 Norwegians. The authors found that topic match has the highest predictive power.
- Sertkan and Neidhardt [2023] examine the emotional dimension of news articles. They argue that authors inevitably leave some emotional cues in the articles despite efforts to keep the tone objective. The authors check whether news recommender systems reduce diversity in emotions and find some evidence for it.
- Kolb et al. [2023] advocate for beyond accuracy optimization of news recommender systems. Their survey explores different dimensions including diversity, serendipity, and novelty. The authors interview a set of experts and summarize their views. Results indicate that serendipity represents the most common objective beyond accuracy.

Overall, the presented works illuminated the complexities and challenges in the news personalization and the presentation of news. One major line of research focused the necessity for a multi-stakeholder perspective and the pursuit of objectives beyond mere accuracy in news recommender systems, advocating for greater transparency and content diversity. Another dominant research topic explores the technical efficacy of AI systems, such as ChatGPT, in news ranking and the impact of various user-preference features. Additional insights are provided into the emotional and multicultural aspects of news, highlighting the significance of sentiment and cultural diversity in news reporting and consumption.

4 Future Directions

Discussions during the workshop emphasized the need to involve experts from different fields. News represents an interdisciplinary domain that involves not only Computer Science, but also Social Sciences, Media Science, Political Science, and Legal Science. INRA has been attached to mainly Computer Science conferences in the past. Attendees also suggested to better involve legislators and news organizations. While legislators often express the wish to better understand technology, there have been very few attending events such as INRA. ChatGPT's release in November 2022 marks an incision making (generative) AI available to the general public. We expect that this will have long-lasting effects which will be subject to further research. News organizations already struggle to maintain public's trust and they will likely continue to struggle. Future editions of INRA can help to address some of the pressing issues and devise strategies to better understand them.

Acknowledgements

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