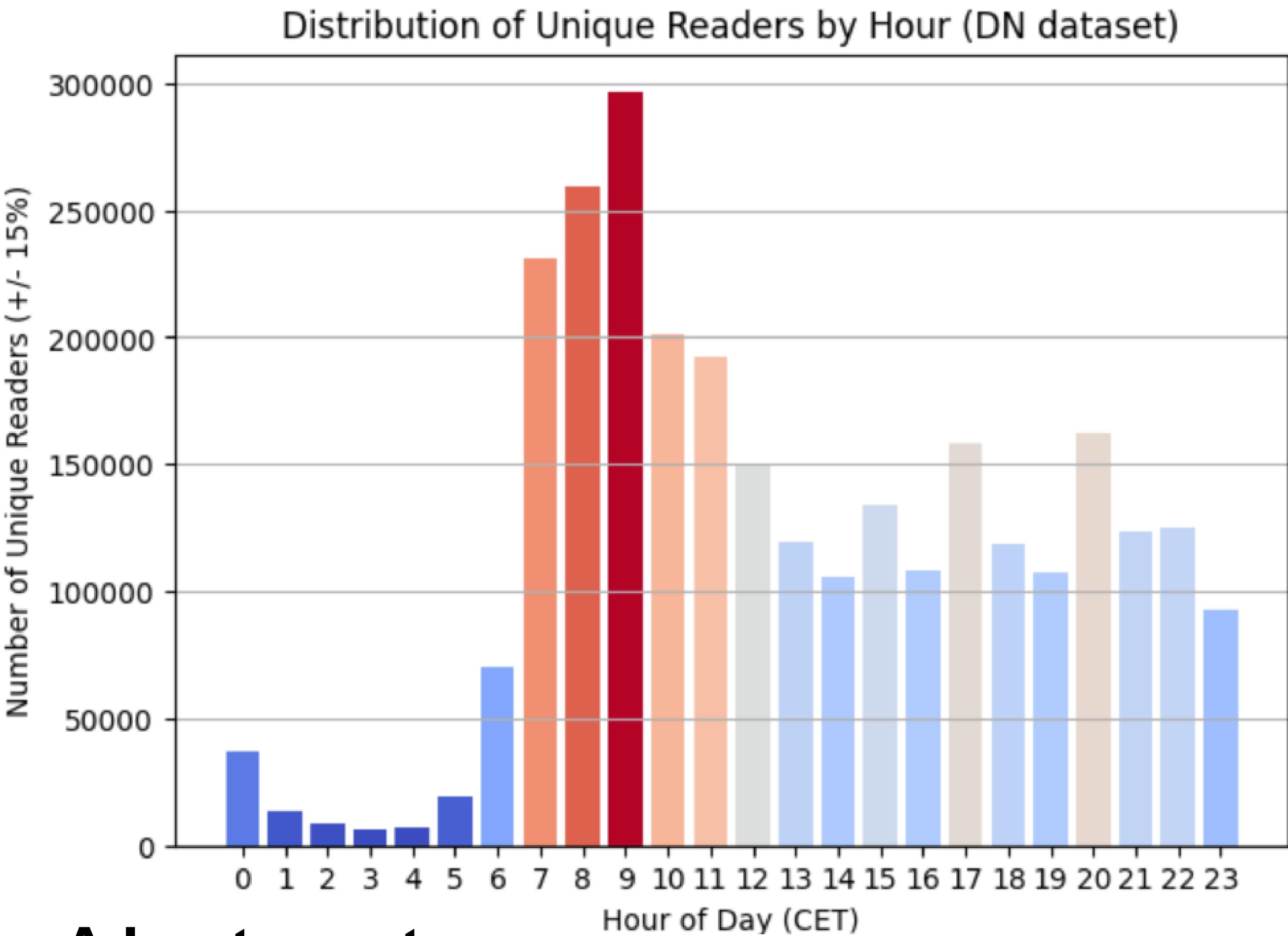


# Analysis of User Interactions with a Personalized News Recommender System

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Media  
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## Abstract

In an increasingly interconnected world, the volume of newsworthy events and the corresponding news coverage have grown dramatically. This proliferation of information presents both an opportunity and a challenge: while users have access to more news than ever before, filtering and identifying relevant, trustworthy content has become increasingly complex.

To address this, recommender systems for news have emerged as a powerful solution. These systems leverage user preferences, reading behavior, and contextual data to deliver personalized news content efficiently.

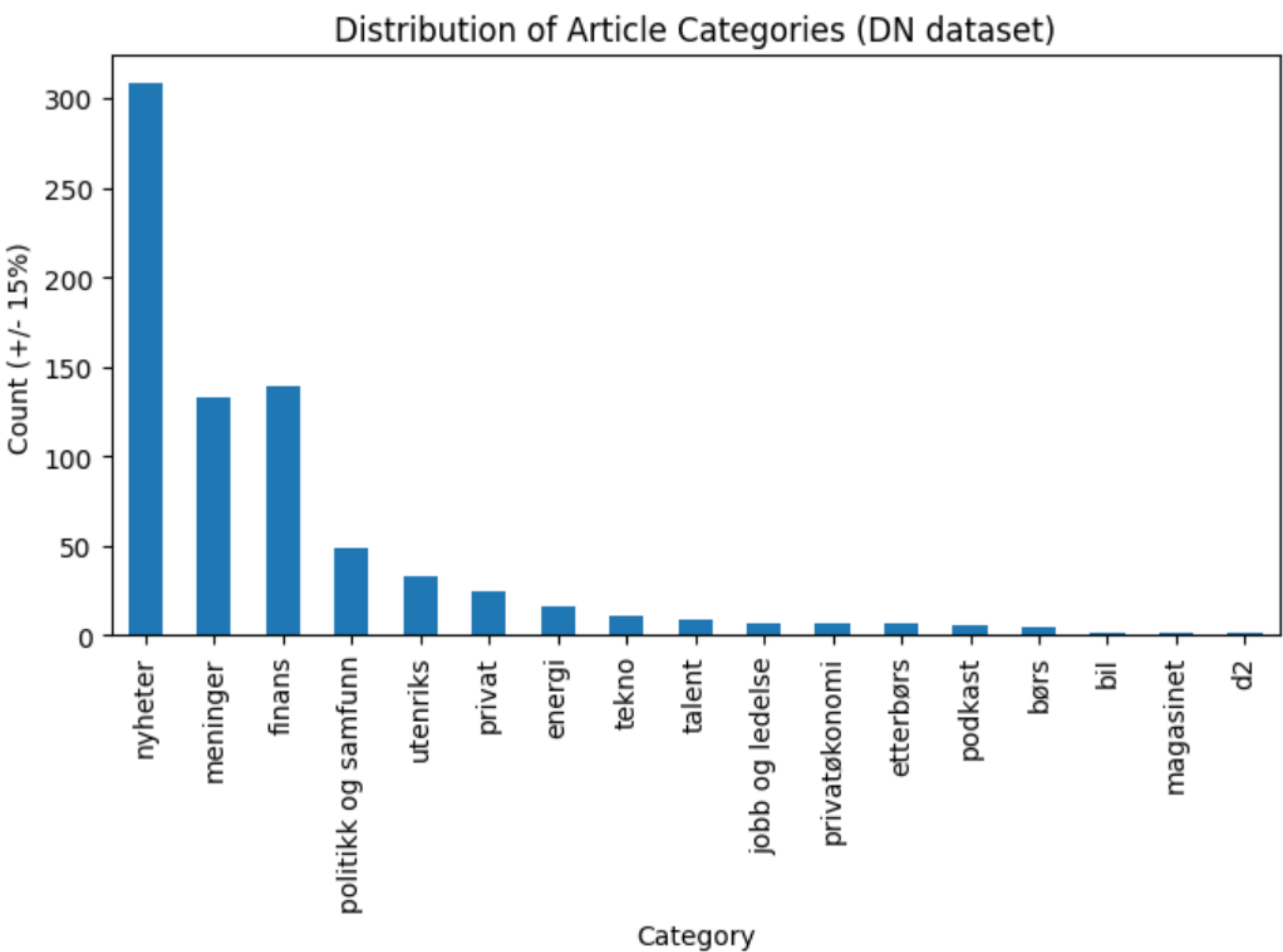
Key benefits include enhanced user satisfaction through tailored recommendations, improved engagement, and the potential to combat misinformation by prioritizing credible sources. As such, news recommender systems play a vital role in helping users navigate the modern information landscape more effectively.

## Research question

RQ1: How can user interactions and news content be combined and utilized in a personalized recommender system to better align recommendations with a user's true interests when reading news online?

I initially began by analyzing a dataset provided by Dagens Næringsliv which is what the figures are based on. The figure to the top left shows the distribution of reading activity throughout the day. The distribution illustrated by the figure indicates there are multiple “waves” of readers; the primary wave peaks at 9, with smaller waves later in the afternoon/evening. These waves in turn, might have different reading preferences.

The figure at the bottom right displays the distribution of articles by category in the DN dataset. It clearly shows that some categories are more populous than others. This highlights a common challenge known as the "long tail problem," where many items have low popularity. Addressing this issue is important because users interested in these less popular categories may receive fewer recommendations and less visibility due to their limited presence and traffic.



## Conclusion

Although this project is still in its early stages, this collaboration between MediaFutures and Dagens Næringsliv sets the stage for meaningful exploration into next-generation news recommendation systems.

By leveraging recent advances in large language models and vector embeddings, we aim to develop more context-aware, personalized, and trustworthy recommendation tools. Future work will focus on EDA, prototyping, evaluating different recommendation strategies, and aligning technical development with journalistic values.

### PARTNERS



### HOST



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