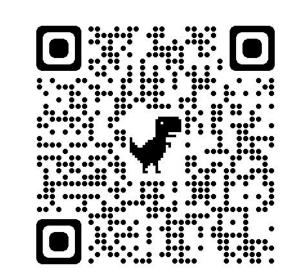
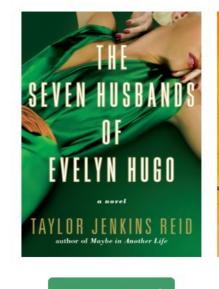
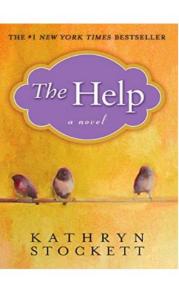


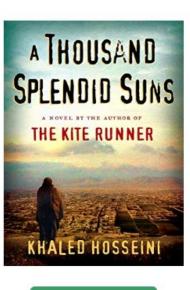
Fair Ranking Metrics Amifa Raj

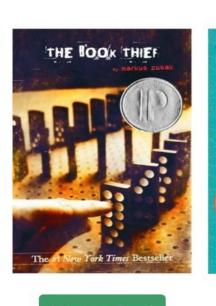


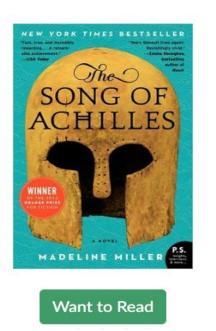












Is this ranked list fair for the item provider?

Which metric to use?





Comprehensive Analysis of Fair Ranking Metrics

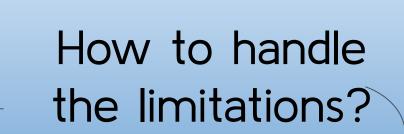
Contribution

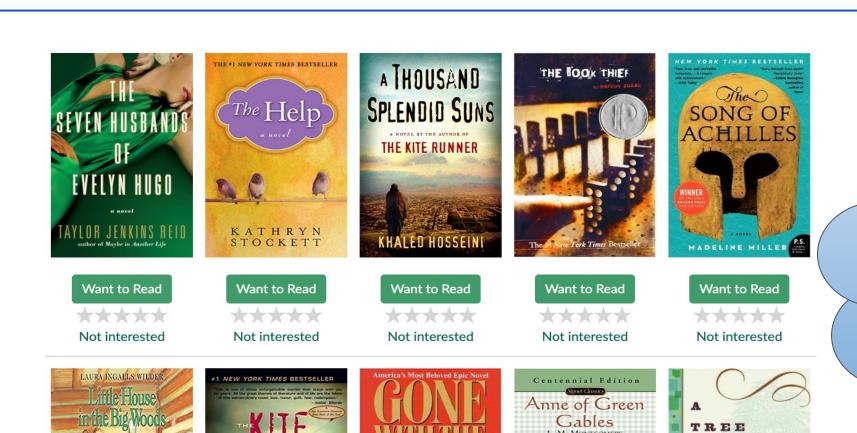
- Described fair ranking metrics using unified notation
- Identified the gaps between the conceptual and practical application of these metrics
- Identified strengths and limitations of the metrics
- Sensitivity analysis showing the impact of external factors on metric implementation
- Aid researchers and practitioners in selecting suitable metrics

Key Findings

- Metrics are surprisingly similar in underlying concept
- Missing data, missing relevance information, ranked list size are crucial/delicate factors in implementing metrics
- Metrics differ in their sensitivity towards external factors.

How to broaden metric applicability?





How to measure fairness in grid-based browsing model?

Expanding Applicability of Fair Ranking Metrics

Goal: Design fair ranking metrics compatible to grid-based browsing models

Status: In-progress: background study, formulating research questions

GROWS

BROOKLYN

Consider Bias in Relevance

Goal: Addressing social bias in relevance data while measuring fairness

Status: Planning phase

How to consider bias in relevance?

Publications

- 1. Raj, A., & Ekstrand, M. D. (2022, July). Measuring Fairness in Ranked Results: An Analytical and Empirical Comparison. In Proceedings of the 45th International ACM SIGIR Conference on Research and Development in Information Retrieval (pp. 726-736) DOI 10.1145/3477495.3532018
- 2. Raj, A., Wood, C., Montoly, A., & Ekstrand, M. D. (2020). Comparing fair ranking metrics. 3rd FAccTRec Workshop: Responsible Recommendation arXiv:2009.01311.