

# Kathleen Cachel

P.h.D. Candidate Data Science  
Worcester Polytechnic Institute

Massachusetts, USA  
✉ [kcachel@wpi.edu](mailto:kcachel@wpi.edu)  
<https://kcachel.github.io>

## Research Interests

Fair ML · Responsible AI · Information Retrieval · Ranking Systems · Social Choice Theory

## Education

2020-2025 (expected) *Ph.D. Data Science, Worcester Polytechnic Institute*, Worcester, MA.  
Advisor: Elke Rundensteiner. Grade Point Average (GPA): 4.0

August 2016 - July 2020 *B.S. Computer Science, Tufts University*, Medford, MA.

## Research & Work Experience

Jan. 2021 - May 2025 (expected) *Research Assistant - Responsible AI, WPI, Worcester, MA.*  
Lead researcher on rank-based algorithmic fairness (i.e, fairML) decision-making project. Building fair and flexible algorithmic systems for ranking, preference aggregation, and information retrieval. Designing fairness auditing and human-in-the-loop bias mitigation technologies.

August 2016 - July 2020 *Program Manager I & Program Manager II, Microsoft, Cambridge, MA.*  
Shipped Office collaboration feature improvements informed by key user metrics, data mining of customer-feedback, A/B testing, and experimentation. Developed internal KPI and analytics pipeline for business decision-making.

## Publications

Hilson Shrestha, Kathleen Cachel, Mallak Alkhathlan, Elke Rundensteiner and Lane Harrison. “FairFuse: Interactive Visual Support for Fair Consensus Rankings.” 2022 IEEE VIS. 

Kathleen Cachel, and Elke Rundensteiner. “FINS Auditing Framework: Group Fairness for Subset Selections.” In *Proceedings of the 2022 AAAI/ACM Conference on AI, Ethics, and Society (AIES)*. 

Kathleen Cachel, Elke Rundensteiner, and Lane Harrison. “Mani-Rank: Multiple Attribute and Intersectional Group Fairness For Consensus Ranking.” 2022 IEEE 38th International Conference on Data Engineering (ICDE). 

## Teaching & Mentorship

*Teaching Assistant:* Graduate Introduction to Data Science (Fall 2020), Graduate Machine Learning (Spring 2021)

*Summer NSF REU Project Advisor (Summer 2022):* Scoped project and advised team of 3 undergraduates and a junior PhD student on project: “Is it (still) Fair? Fairness in Learning to Ranking Under Demographic Uncertainty”.

## Professional Service

**Conference Organizer:** Women in Data Science (WiDS) Central Massachusetts. (2021, 2022)

**Reviewer:** Workshop on Human and Machine Decision @ NeurIPS. (2021)

**Student Volunteer:** ACM FAcct. (2022)