

Seyun Kim

seyunkim@cs.cmu.edu

<https://www.seyunkim.com/>

RESEARCH INTERESTS Human-AI Interaction; Fairness, Accountability and Transparency; Responsible AI

EDUCATION **Carnegie Mellon University** Pittsburgh, PA

Ph. D. in Human-Computer Interaction, School of Computer Science 2021-Current

Expected Graduation: May, 2027

Advisors: Motahhare Eslami & Haiyi Zhu

Cornell University Ithaca, NY

M.S. in Computer Science August 2021

B.S. in Computer Science; Minor in Information Science May 2019

M.S. Thesis: Group Affect and Group Cohesion in Human-Agent Teams

Advisors: Malte Jung & Susan Fussell

ON-GOING PROJECT & RESEARCH STATEMENT

My research lies on operationalizing equity within data-driven technologies and artificial intelligence. I explore integrating equity throughout the machine learning pipeline from the early-stages of model creation to evaluation. Using mixed-methods approaches, **I uncover the nuances and complex challenges of integrating equity into AI by designing, developing, and evaluating interventions to achieve equitable outcomes.**

Currently, my project involves developing interventions to address health equity in the context of breast cancer disparities. Involving impacted stakeholders such as clinicians, patients, and health advocacy groups, I am designing and developing interventions that augment clinical decisions. Leveraging generative AI, we aim to enhance equity of breast cancer risk prediction tools and support the development of AI systems that foster health equity.

PEER REVIEWED PUBLICATIONS

Seyun Kim, Yunachen Bai, Haiyi Zhu *, Motahhare Eslami* . “Systematic Literature Review on Equity in Algorithms in HCI and Fairness” (CSCW 2025 Conditionally Accepted)

Seyun Kim, Bonnie Fan, Willa Yang, Yinan Li, Jonathan Ho, Sarah Fox, Jessie Ramey, Haiyi Zhu, John Zimmerman, Motahhare Eslami. “Integrating Equity in Public Sector Data-Driven Decision Making: Exploring the Desired Futures of Underserved Stakeholders”
<https://doi.org/10.1145/3686905> (CSCW 2024)

Seyun Kim, Bonnie Fan, Willa Yunqi Yang, Jessie Ramey, Sarah E Fox, Haiyi Zhu, John Zimmerman, and Motahhare Eslami. 2024. Public Technologies Transforming Work of the Public and the Public Sector. In Proceedings of the 3rd Annual Meeting of the Symposium on Human-Computer Interaction for Work (CHIWORK '24), June 25–27, 2024, Newcastle upon Tyne, United Kingdom. ACM, New York, NY, USA, 12 pages.
<https://doi.org/10.1145/3663384.3663407> (**Best Paper Award**)

Claire, Houston, **Seyun Kim**, René F. Kizilcec, and Malte Jung. "The social consequences of machine allocation behavior: Fairness, interpersonal perceptions and performance." *Computers in Human Behavior* 146 (2023): 107628.

Zhang, Ruidong, Jihai Zhang, Nitish Gade, Peng Cao, **Seyun Kim**, Junchi Yan, and Cheng Zhang. "EatingTrak: Detecting Fine-grained Eating Moments in the Wild Using a Wrist-mounted IMU." *Proceedings of the ACM on Human-Computer Interaction* 6, no. MHCI (2022): 1-22.

WORKSHOP PUBLICATIONS

Jane Hsieh, Angie Zhang, Seyun Kim, Varun Nagaraj Rao, Samantha Dalal, Alexandra Mateescu, Rafael Do Nascimento Grohmann, Motahhare Eslami, Min Kyung Lee, and Haiyi Zhu. 2024. Worker Data Collectives as a means to Improve Accountability, Combat Surveillance and Reduce Inequalities . In Companion of the 2024 Computer-Supported Cooperative Work and Social Computing (CSCW Companion '24), November 9–13, 2024, San Jose, Costa Rica. ACM, New York, NY, USA, 4 pages. <https://doi.org/10.1145/3678884.3681829>

Claire, Houston, Mai Lee Chang, Seyun Kim, Daniel Omeiza, Martim Brandao, Min Kyung Lee, and Malte Jung. "Fairness and Transparency in Human-Robot Interaction." In 2022 17th ACM/IEEE International Conference on Human-Robot Interaction (HRI), pp. 1244-1246. IEEE, 2022.

RESEARCH EXPERIENCE

CMU 4A Lab & Social AI Group

Advisors: Prof. Motahhare Eslami, Prof. Haiyi ZHU 2021-present

Equity in AI systems: Surfacing, integrating, and evaluating equity in AI systems in the context of public sector and healthcare

Cornell Robots in Groups Lab

2019-2021

Advisors: Prof. Malte Jung, Prof. Susan Fussell

Developed Co-Tetris, a research platform to investigate the influence of AI agent's decision on team members' perceived fairness

Master Thesis: "Group Affect and Group Cohesion in Human-Agent Teams"

Cornell SciFi Lab (Ubiquitous Computing) 2019

Advisors: Prof. Cheng Zhang

Fine-grained Eating Detection (EatingTrak): Used commodity smartwatch to detect fine-grained eating and drinking activities at per-intake level in laboratory, semi-wild and free-living environments.

Cornell Interaction Design Lab 2017

Advisors: Prof. Geri Gay

Created Personal Informatics Data-Driven Games that help people gain meaningful knowledge about their behaviors using personal data

ACADEMIC SERVICE

Reviewer 2022-2024

ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)
ACM Conference on Human Factors in Computing Systems(CHI)

Student Volunteer
ACM CHI, New Orleans 2022

MENTORING EXPERIENCE

Yuanchen Bai, Ph.D. at Cornell University

Yinan Li, Ph.D. student at Arizona State University

Jonathan Ho, undergraduate student at Carnegie Mellon University

TEACHING EXPERIENCE

Human-AI Interaction 2024

Programming Usable Interfaces 2023

Introduction to Computing Using Python 2020-2021

Introductory Design and Programming for the Web 2019

Advanced Human Computer Interaction Design 2019

Foundations of Artificial Intelligence 2017

ACADEMIC HONORS

The National Science Foundation's Innovation Corps (NSF I-Corps) - Technical Lead I-Corps:
Algorithm to Support Teams and Teamwork Through Artificial Intelligence

Cum Laude Bachelor of Science in School of Engineering, Cornell University
Teach Assistant Recognition Award, Cornell University
Dean's Honor List, College of Engineering, Cornell University (5 Semesters)