Hye Sun Yun

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RESEARCH INTERESTS

Responsible AI, Natural Language Processing, Human-Computer Interaction, & Healthcare

EDUCATION

| Northeastern University | 2020–Present |
|-------------------------------------------------|---------------|
| Ph.D. in Computer Science | Boston, MA |
| Advisors: Byron C. Wallace and Timothy Bickmore | |
| Expected Graduation: Spring 2026 | |
| Northeastern University | 2022 |
| M.S. in Computer Science | Boston, MA |
| Wellesley College | 2013–2017 |
| B.A. in Computer Science and Africana Studies | Wellesley, MA |
| Magna Cum Laude; Phi Beta Kappa | |

TEACHING EXPERIENCE

Instructor of Record

| Intermediate Programming with Data (DS2500) – co-instructed with Deahan Yu | Fall 2025 |
|----------------------------------------------------------------------------|-------------|
| Northeastern University | |
| 1 lecture section, 200+ students for course, 15 TAs | |
| Special Topics: Research in Human-Centered NLP (CS4983/6983) | Spring 2025 |
| Northeastern University | |
| 1 lecture section, 10 students | |
| oachina Assistant | |

Teaching Assistant

| • Introduction to CS Research (CS3950) at Northeastern University | Fall 2024 |
|-------------------------------------------------------------------|-------------|
| Quality Assurance to Quality Engineer Program at Wayfair | Fall 2019 |
| MVC Framework Course at Wayfair | 2019–2020 |
| • Tangible User Interfaces (CS320) at Wellesley College | Fall 2016 |
| Languages & Automata (CS235) at Wellesley College | Fall 2016 |
| Algorithms (CS231) at Wellesley College | Spring 2016 |
| • Beginning Japanese (JPN101,102) at Wellesley College | 2014–2015 |

Workshops

| Introduction to GitHub Workshop (Khoury SHEROs of Color Hackathon) | March 2025 |
|--------------------------------------------------------------------|------------|
| Instructor at Northeastern University | |

Guest Lectures

| "Virtual Agents for Health Behavior Change" | Fall 2022 |
|---------------------------------------------|-----------|
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Course: CS3950 Introduction to CS Research at Northeastern University

PUBLICATIONS

Peer-Reviewed Conference Papers

- 1. **Hye Sun Yun**, Karen Y.C. Zhang, Ramez Kouzy, Iain J. Marshall, Junyi Jessy Li, & Byron C. Wallace. "Caught in the Web of Words: Do LLMs Fall for Spin in Medical Literature?" In *Proceedings of Conference on Health, Inference, and Learning (CHIL)*, 2025.
- 2. **Hye Sun Yun** & Timothy Bickmore. "Framing Health Information: The Impact of Search Methods and Source Types on User Trust and Satisfaction in the Age of LLMs." In *Proceedings of the Extended Abstracts of the CHI Conference*, 2025.
- 3. **Hye Sun Yun**, David Pogrebitskiy, Iain J. Marshall, & Byron C. Wallace. "Automatically Extracting Numerical Results from Randomized Controlled Trials with Large Language Models." In *Proceedings of the Machine Learning for Healthcare (MLHC) Conference*, 2024.
- 4. Mina Fallah, Farnaz Nouraei, **Hye Sun Yun**, & Timothy Bickmore. "Investigating User Perceptions of Collaborative Agenda Setting in Virtual Health Counseling Session." In *Proceedings of the ACM International Conference on Intelligent Virtual Agents (IVA)*, 2024.
- 5. **Hye Sun Yun**, Iain J. Marshall, Thomas A. Trikalinos, & Byron C. Wallace. "Appraising the Potential Uses and Harms of LLMs for Medical Systematic Reviews." In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2023.
- 6. Prasanth Murali, Ian Steenstra, **Hye Sun Yun**, Ameneh Shamekhi, & Timothy Bickmore. "Improving Multiparty Interactions with a Robot Using Large Language Models." In *Proceedings of the Extended Abstracts of the CHI Conference*, 2023.
- 7. **Hye Sun Yun**, Matias Volonte, & Timothy Bickmore. "Motivating health behavior change with a story-telling virtual agent." In *Proceedings of the ACM International Conference on Intelligent Virtual Agents (IVA)*, 2022.

Journal Articles

- 1. **Hye Sun Yun** & Timothy Bickmore. "Online Health Information—Seeking in the Era of Large Language Models: Cross-Sectional Web-Based Survey Study." *Journal of Medical Internet Research (JMIR)*, Volume(27), 2025.
- 2. Iain J. Marshall, Thomas A. Trikalinos, Frank Soboczenski, **Hye Sun Yun**, Gregory Kell, Rachel Marshall, & Byron C. Wallace. "In a pilot study, automated real-time systematic review updates were feasible, accurate, and work-saving." *Journal of Clinical Epidemiology*, Volume(153), 2023.

Workshop Papers

1. **Hye Sun Yun**, Shuo Zhou, Everlyne Kimani, Stefan Olafsson, Teresa K. O'Leary, Dhaval Parmar, Jessica A. Hoffman, Stephen S. Intille, Michael K. Paasche-Orlow, & Timothy Bickmore. "Techno-spiritual Engagement: Mechanisms for Improving Uptake of mHealth Apps Designed for Church Members." In *HEALTHI at Conference on Intelligent User Interfaces (IUI)*, 2022.

Media Articles

1. Teresa K. O'Leary, Elizabeth Stowell, Darley Sackitey, **Hye Sun Yun**, David Wright, Michael K. Paasche-Orlow, Timothy Bickmore, & Andrea G. Parker. "Church after Sunday: supporting everyday well-being through techno-spiritual health interventions." In *ACM Interactions*, 2022.

PROFESSIONAL EXPERIENCE

Truveta Summer 2024

AI/ML Research Intern Remote (Seattle, WA)

Mentors: Saman Zarandioon, Mehraveh Salehi, Sadra Naddaf

- Conducted research in the field of LLMs and clinical notes investigating quality and diversity of training data for clinical concept extraction
- Explored methods to optimize a generalized clinical concept extraction LLM

Wayfair 2017–2020

Full-Stack Software Engineer/Manager

Boston, MA

- Developed and implemented features for a supplier-facing web tool, enabling efficient bulk addition of new products to the catalog
- Successfully spearheaded two major, multi-phase refactoring initiatives: frontend migration from Tungsten to React and Redux and completely rewriting the team's Excel sheet import service
- Provided guidance and mentorship during rapid team growth, facilitating the onboarding of 10+ new hires
- Led team-wide adoption of pair programming to foster collaboration and knowledge sharing and established a program to train new code reviewers
- Managed and led a team of three software engineers, cultivating a collaborative and productive work environment, and ensuring successful project delivery

RESEARCH MENTORSHIP

| Karen Y.C. Zhang, B.S. in Computer Science at Northeastern University | Spring–Summer 2025 |
|-----------------------------------------------------------------------|--------------------|
| Patrick Wilson, Master's in Public Health at King's College London | Spring–Fall 2024 |
| David Pogrebitskiy, B.S. in Data Science at Northeastern University | Spring 2024 |
| Nikita Salkar, M.S. in Computer Science at Northeastern University | Spring 2022 |

SERVICE & OUTREACH

Northeastern University Institutional Service

| PhD Open House | 2021 & 2024 |
|----------------|-------------|
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Student Panelist & Prospective Student Buddy

Pathway to PhD Workshop Summer 2022

PhD Student Panelist

Wellesley College Research Students' Visit Summer 2022

PhD Student Panelist

PhD Hiring Committee 2022

Faculty Application Reviewer

PhD CS Admissions Committee 2021

PhD Student Application Reviewer

Community Engagement

Code to PhD Fall 2025-Present

PhD Application Support Program Mentor

Khoury SHEROs of Color

Spring 2025

PhD Student Panelist, GitHub Workshop Instructor, & Hackathon Mentor

Queer in AI Fall 2023

Graduate School Application Review Program Mentor

Wayfair's Women+ in Software

2019-2020

Co-founder & Leader

Peer Reviewer

Conferences

CHI 2023 & 2025

Machine Learning for Healthcare (MLHC) 2025

Conference on Language Modeling (COLM) 2025

IEEE Virtual Reality 2025

Intelligent Virtual Agents (IVA) 2023-2025

Autonomous Agents and Multiagent Systems (AAMAS) 2023

IEEE International Symposium on Mixed and Augmented Reality (ISMAR) 2023

Journals

International Journal of Human-Computer Studies 2025 Journal of Medical Internet Research (JMIR) 2025

Cochrane Evidence Synthesis and Methods 2025

Research Synthesis Methods 2024–2025

Workshops

ACL Workshop on Human-Centered Large Language Modeling 2024

NeurIPS Workshop on Robustness in Sequence Modeling 2022

ACM Web Conference Workshop on UserNLP 2022

TALKS

- 1. "Beyond Hallucinations: Unveiling Hidden Dangers of LLMs in Health Information Access" (June 2025). Invited talk. Wellesley College.
- 2. "Beyond Hallucinations: Unveiling Hidden Dangers of LLMs in Health Information Access" (April 2025). Invited talk. Clemson University.
- 3. "Charting My CS Career Path: From Wellesley to Industry and PhD" (Nov. 2024). Invited talk. Wellesley College Hackathon.
- 3. "Automatically Extracting Numerical Results from RCTs with LLMs" (Oct. 2024). Invited talk. Codametrix Reading Group.
- 4. "Using LLMs to Maintain User Engagement in Repeated Virtual Agent Interviews" (Sept. 2024). Conference talk at IVA 2024.
- 5. "Techno-spiritual Engagement: Mechanisms for Improving Uptake of Church mHealth App" (March 2022). Workshop talk at IUI HEALTHI Workshop 2022.
- 6. "Longitudinal Analysis of African-American Vaccine Attitudes on Social Media" (Dec. 2021). Talk at PRISM Health Symposium. [Best Rapid-Fire Presentation Award]

PRESS

1. "Dr. Google Starts Sharing Regular Folks' Advice As Chatbots Loom" by Michael L. Millenson. *Forbes*, May 2025

PROFESSIONAL DEVELOPMENT

Graduate Postsecondary Teaching Certificate Program

2024–Present

Northeastern University, Boston, MA

Consortium for the Science of Sociotechnical Systems Summer Research Institute

Summer 2025

CSST, Syracuse University

National Research Mentoring Network's Research Mentor Training

Summer 2024

NRMN - Northeatsern University, Boston, MA

CRA-WP Grad Cohort for Women

Spring 2023

CRA-WP, San Francisco, CA

ACL Year-Round Mentorship

2022

ACL, Remote

SKILLS

Tools/Platforms: pyTorch, Huggingface, scikit-learn, statsmodels, Pandas, Azure, Google Cloud Platform (GCP), Docker, Weights & Biases, Prolific, Node.js, REST API, Flask, .NET Core

Front-end: React, Redux, Vue.js, HTML5, CSS, SASS, Jekyll

Databases: MySQL, SQLite, PostgreSQL, MS SQL Server

Programming Languages: Python, Java, Javascript, C#, SQL, R, MT-X, Shell, PHP, C

Human Languages: Korean and English (bilingual), Japanese (beginner), Swahili (novice)