Hye Sun Yun

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RESEARCH INTERESTS

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

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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 — 2024
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) – with Deahan Yu — Fall 2025
Northeastern University
1 out of 4 lecture sections, 200+ students for course, 15 TAs

Special Topics: Research in Human-Centered NLP (CS4983/6983) — Spring 2025
Northeastern University
1 lecture section, 10 students

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 (Khoury SHEROs of Color Hackathon) March 2025
Instructor at Northeastern University

Guest Lectures

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

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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 *Main 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 storytelling 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

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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

HONORS & AWARDS

Selected as a mentee for CSST Summer Institute 2025   2025
Consortium for the Science of Sociotechnical Systems, *Syracuse University*

Selected as participant for CRA-WP Grad Cohort for Women   2023
Computing Research Association–Widening Participation, *San Francisco, CA*

Best Rapid-Fire Presentation Award   2021
RISM Health Symposium, *San Francisco, CA*

SERVICE & OUTREACH

Northeastern University Institutional Service

PhD Open House   2021 & 2024
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 & 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 at Department Seminar. 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. IVA 2024.

5. "Techno-spiritual Engagement: Mechanisms for Improving Uptake of Church mHealth App" (March 2022). Workshop talk. IUI HEALTHI Workshop 2022.

6. "Longitudinal Analysis of African-American Vaccine Attitudes on Social Media" (Dec. 2021). Rapid Research Talk with Silvio Amir. PRISM Health Symposium. *[Best Rapid-Fire Presentation Award]*

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

2. "As AI expands into medicine, Northeastern study finds AI models influenced by medical bias" by Emily Spatz. *Khoury News*, August 2025.

PROFESSIONAL DEVELOPMENT

Graduate Postsecondary Teaching Certificate Program 2024–Present

NRMN's Research Mentor Training Summer 2024
National Research Mentoring Network, *Northeastern University*

ACL Year-Round Mentorship 2022
Association for Computational Linguistics, *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, LaTeX, Shell, PHP, C

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

Last updated: August 27, 2025