Hye Sun **Yun**

COMPUTER SCIENCE PHD STUDENT

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Education

Northeastern University   *Boston, MA*
PH.D. IN COMPUTER SCIENCE   *September 2022 - Present*
- Advised by Timothy Bickmore and Byron Wallace

Wellesley College   *Wellesley, MA*
B.A. IN COMPUTER SCIENCE AND AFRICANA STUDIES, MAGNA CUM LAUDE   *September 2013 - May 2017*

Research Experience

Northeastern University, Relational Agents Group   *Boston, MA*
RESEARCH ASSISTANT   *September 2020 - Present*
- Conducted research in the field of HCI and healthcare advised by Timothy Bickmore.
- Assisted in developing a research mHealth app with a conversational virtual agent to promote healthy behaviors for historically Black church members by exploring ways to increase engagement and use through notifications and storytelling.
- In-progress work on enhancing patient-reported outcomes for individual use through embodied conversational agents.
- In-progress work on using large language models to generate clinical depression survey item variants and testing their validity and reliability.

Northeastern University, NLP Research Group   *Boston, MA*
RESEARCH ASSISTANT   *September 2020 - Present*
- Conducted research in the field of NLP and biomedical text advised by Byron Wallace.
- Worked on NLP multi-document summarization research to improve and update systematic reviews of biomedical literature to help medical professionals make better clinical and policy decisions.
- Explored ways to utilize large generative language models to help with writing systematic reviews of biomedical literature through user surveys.

University of Houston, Computational Biomedicine Lab   *Houston, TX*
REU UNDERGRADUATE RESEARCHER   *June 2016 - August 2016*
- Completed an NSF-funded 10 week research program at the University of Houston under the supervision of Professor Ioannis A. Kakadiaris.
- Co-authored a literature review on anti-spoofing techniques for face recognition in computer vision systems.
- Compared how spoofing affects the accuracy of different face recognition systems.

Professional Experience

Wayfair   *Boston, MA*
FULL-STACK SOFTWARE ENGINEER/ENGINEERING MANAGER   *July 2017 - August 2020*
- Contributed to building new features as a full-stack developer of the supplier-facing web tool for adding new products to the catalog in bulk.
- Led 2 large, multi-phase refactoring projects – a conversion of the frontend from Tungsten to React and Redux and the rewriting of my team's Excel sheet import service.
- Guided and mentored my team through the addition of 10+ new hires as the most senior engineer on the team.
- Led larger team effort to incorporate pair programming as part of development work and led a program to train more code reviewers on the team
- Gave department and team-wide talks on creating reusable Redux components and Jest testing.
- Led and managed a team of 3 software engineers.

Teaching Experience

Wayfair   *Boston, MA*
TEACHING ASSISTANT   *January 2019 - August 2020*
- Assisted students during the hands-on activities during Wayfair's onboarding MVC framework class, once every 3 months.
- Answered questions online and in-person about MVC framework at Wayfair.

Wayfair *Boston, MA*

QUALITY ASSURANCE TO QUALITY ENGINEER PROGRAM INSTRUCTOR *September 2019 - October 2019*

- Led and instructed 4 department-wide sessions on SQL and Introduction to Programming in PHP to beginners on coding.

Wayfair *Boston, MA*

LABS MENTOR *August 2019*

- Co-mentored 30 entry-level engineers in the Labs program on their first month's full-stack project (React and PHP).
- Provided constant technical feedback through code reviews and conversations during weekly drop-in hours.

Wellesley College, Pforzheimer Learning and Teaching Center *Wellesley, MA*

PEER TUTOR AND GRADER *September 2014 - May 2016*

- Spring 2016 | CS 231 Algorithms | Held weekly group tutoring sessions and graded homework. Contributed to weekly calibration meetings and teaching pedagogy discussions with the professor and fellow tutors & graders.
- Fall 2016 | CS 320 Tangible User Interface | Held weekly drop-in hours.
- Fall 2016 | CS 235 Languages & Automata | Held 1-1 tutoring and review sessions for CS235
- Fall 2014 & Spring 2015 | JPN 101 & 102 Beginning Japanese | Held weekly drop-in sessions to help students with their oral exercises and written homework.

Publication

JOURNAL ARTICLES

In a pilot study, automated real-time systematic review updates were feasible, accurate, and work-saving

Iain J. Marshall, Thomas A. Trikalinos, Frank Soboczenski, **Hye Sun Yun**, Gregory Kell, Rachel Marshall, Byron C. Wallace

Journal of Clinical Epidemiology 153 (2023) pp. 26–33. 2023

Church after Sunday: supporting everyday well-being through techno-spiritual health interventions

Teresa K O'Leary, Elizabeth Stowell, Darley Sackitey, **Hye Sun Yun**, David Wright, Michael Paasche-Orlow, Timothy Bickmore, Andrea G. Parker

Interactions 29.4 (2022) pp. 90–93. ACM New York, NY, USA, 2022

CONFERENCE PROCEEDINGS

Motivating Health Behavior Change with a Storytelling Virtual Agent

Hye Sun Yun, Matias Volonte, Timothy Bickmore

Proceedings of the 22nd ACM International Conference on Intelligent Virtual Agents, 2022, Faro, Portugal

Techno-Spiritual Engagement: Mechanisms for Improving Uptake of mHealth Apps Designed for Church Members

Hye Sun Yun, Shou Zhou, Everlyne Kimani, Stefan Olafsson, Teresa K. O'Leary, Dhaval Parmar, Jessica A. Hoffman, Stephen S. Intille, Michael K. Paasche-Orlow, Timothy W. Bickmore

Joint Proceedings of the IUI 2022 Workshops: APEx-UI, HAI-GEN, HEALTHI, HUMANIZE, TExSS, SOCIALIZE co-located with the ACM International Conference on Intelligent User Interfaces (IUI 2022), Virtual Event, Helsinki, Finland, March 21-22, 2022, 2022

Grants & Awards

GRANTS

2015	**Global Engagement Internship/Grant**, Wellesley College's Center for Work and Service Summer Internship Grant	*Wellesley, MA*

AWARDS

2019	**1st Place**, Wayfair Supplier DIY Innovation Day	*Boston, MA*
2018	**Runner Up**, Wayfair Challenge Day	*Boston, MA*

Presentation

ACM IUI HEALTHI Workshop *Remote*

PRESENTER FOR <TECHNO-SPIRITUAL ENGAGEMENT: MECHANISMS FOR IMPROVING UPTAKE OF MHEALTH APPS DESIGNED FOR CHURCH MEMBERS> *March 2022*

PRISM Health Symposium *San Francisco, CA*

PRESENTER FOR <"LONGITUDINAL ANALYSIS OF THE ATTITUDES AND CONVERSATIONS SURROUNDING VACCINES BY AFRICAN AMERICANS ON SOCIAL MEDIA> *December 2021*

Service and Volunteer

2022	**Sub-reviewer**, Conference on Autonomous Agents and Multiagent Systems (AAMAS 2023)	
2022	**Faculty Application Student Reviewer**, Khoury College of Computer Science, Northeastern University	
2022	**Reviewer**, CHI 2023 Health Subcommittee	
2022	**Reviewer**, Workshop on Robustness in Sequence Modeling for NeurIPS 2022	
Oct. 2022	**Guest Presenter**, Northeastern University's CS3950 Intro to CS Research	*Boston, MA*
Aug. 2022	**Workshop Panelist**, Northeastern University - Pathway to PhD Workshop	*Boston, MA*
2022	**Program Committee Member**, UserNLP: User-centered Natural Language Processing Workshop	
2021	**PhD Student Application Reviewer**, Khoury College of Computer Science, Northeastern University	
2019-2020	**Leader**, Wayfair's Women+ in Software	*Boston, MA*

Extracurricular Activity

2022	**Class of 2022 mentee**, ACL Year-Round Mentorship