Hayoung Jung

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Research Interests

My research focuses on advancing inclusive AI technologies and online platforms to better serve people who are overlooked in the development of these systems. Driven by my interdisciplinary background, I develop technical frameworks and methods grounded in social science to (1) audit AI technologies and platforms for bias and misinformation, and (2) understand social phenomena, such as community norms, through language and online behavior, to promote socially-attuned and equitable technologies.

Topics: Social Computing, Algorithmic Audits, AI Ethics, Computational Social Science, and NLP.

EDUCATION

University of Washington, Seattle, Washington

2023 - Present

M.S. in Computer Science

Adviser: Tanushree Mitra, GPA: 4.0/4.0

University of Washington, Seattle, Washington

2019 - 2023

B.S. with Distinction in Computer Science, B.A. in Political Science

Departmental Honors; magna cum laude Adviser: Tanushree Mitra, GPA: 3.94/4.0

Publications

* denotes equal contributions

In Preparation

- [1] Hayoung Jung, Shravika Mittal, Munmun De Choudhury, and Tanushree Mitra. Investigating YouTube Search and Recommendations for Online Myths on Opioid Use Disorder. To be submitted at EMNLP 2025.
- [2] Navreet Kaur, **Hayoung Jung**, Shravika Mittal, Munmun De Choudhury, and Tanushree Mitra. Persona-based Evaluation of Generative Search for Opioid-use Information. In preparation.

Peer-Reviewed Conferences

- [3] Hayoung Jung, Prerna Juneja, and Tanushree Mitra. Algorithmic Behaviors Across Regions: A Geolocation Audit of YouTube Search for COVID-19 Misinformation between the United States and South Africa. In Proceedings of ICWSM 2025.
- [4] Shravika Mittal, **Hayoung Jung**, Mai ElSherief, Tanushree Mitra, and Munmun De Choudhury. Online Myths on Opioid Use Disorder: A Comparison of Reddit and Large Language Model. In Proceedings of ICWSM 2025.
- [5] Chan Young Park*, Shuyue Stella Li*, Hayoung Jung*, Svitlana Volkova, Tanushree Mitra, David Jurgens, and Yulia Tsvetkov. ValueScope: Unveiling Implicit Norms and Values via Return Potential Model of Social Interactions. In Proceedings of Findings of EMNLP 2024.
- [6] Preetam Prabhu Srikar Dammu*, Hayoung Jung*, Anjali Singh, Monojit Choudhury, and Tanushree Mitra. "They are uncultured": Unveiling Covert Harms and Social Threats in LLM Generated Conversations. In *Proceedings of EMNLP 2024*. Nominated for Best Paper Award.
 - Featured: "In the 'Wild West' of AI chatbots, subtle biases related to race and caste often go unchecked" (UW News)

Research Experiences Social Computing & Algorithmic Experiences Lab, UW Information School Graduate Research Assistant, advised by Tanushree Mitra

2023 - Present

TsvetShop, UW Computer Science & Engineering Graduate Research Assistant, advised by Yulia Tsvetkov, David Jurgens, & Tanushree Mitra

Social Computing & Algorithmic Experiences Lab, UW Information School Undergraduate Research Assistant, advised by Tanushree Mitra.

2021 - 2023

2023 - 2024

DUB REU Fellow (Summer '21, '22)

Awards & Honors	Graduate Student Conference Presentation Award, UW Graduate School	2024
	Awards \$300 to support registration fees for a conference presentation.	
	Undergraduate Service Award, UW Computer Science & Engineering	2023
	Awards 5 UW CSE undergraduates, out of $2,000$ students, for their outstanding	
	service to the department.	
	Population Health Recognition Award, UW Undergraduate Research Program	2023
	Recognizes undergraduate researchers presenting at the UW Research Symposium	
	for their "innovative and well-presented population health research work."	
	Phi Beta Kappa, Washington Alpha Chapter	2022
	Honors top-ranking students based on cumulative academic achievement.	
	Husky 100 Award, University of Washington	2022
	Awards 100 out of 55,000 students for significant contributions to the university.	-0
	Mary Gates Research Scholarship, University of Washington	2022
	A competitive \$5,000 research scholarship for undergraduates at the UW.	
	CRA Outstanding Undergraduate Researcher Award Nominee, UW Information School	2021
	One of four students nominated by the UW iSchool for the national award.	
	Washington State Opportunity Scholarship, State of Washington	2021
	Awards undergraduate students from low- and middle-income families	2021
	in Washington State to support their higher education pursuits.	
		2020
	Roy F. Mather Scholarship, Community Foundation for Southwest Washington	2020
	Awards \$2,500 to an outstanding engineering student from Southwest Washington.	

TEACHING EXPERIENCE

CSE444: Database Systems Internals, UW CSE

Winter 2025

Graduate Teaching Assistant, Instructor: Ryan Maas

• Led sections for 26 students, held office hours, & answered 250 student questions on the course board.

INFO498: Algorithms and Society. UW Information School

Spring 2024

Guest Lecturer, Title: "My Journey Through Undergraduate Research"

• Presented my research journey, key findings, lessons learned, and ways to get involved in research.

CSE414: Intro to Database Systems, UW CSE

Autumn 2023, Winter 2024

Graduate Teaching Assistant, Instructor: Ryan Maas

• Led sections for 35 students, held office hours, & answered 600 student questions on the course board, receiving positive reviews and a 4.90/5.00 average rating.

CSE190B: CSE Direct Admit Seminar, UW CSE

Autumn 2022

 ${\it Undergraduate \ Teaching \ Assistant}, \ {\it Instructor}: {\it Dan \ Grossman}$

• Prepared discussion segments, organized panels, and held office hours for new college students.

CSE142: Intro to Programming I, UW CSE

Autumn 2021

Undergraduate Teaching Assistant, Instructor: Brett Wortzman

 \bullet Led sections for 25 students, held office hours, & graded assignments, earning 4.92/5.00 average rating.

Juni Learning

Autumn 2020 - Spring 2021

Computer Science Instructor

• Taught introductory Python and Java in weekly one-on-one lessons (220 teaching hours).

Industry Experience

Qualtrics, NLP and Machine Learning

(Forthcoming) Summer 2025

Applied Scientist Intern

• Machine Learning and Natural Language Processing Team.

F5 Networks, Rapid Development Team

Summer 2024

Software Engineer Intern

• Developed a CLI, web browser, and REST API tool to automatically build dependency trees and efficiently search upstream and downstream dependencies of F5OS projects.

F5 Networks, Distributed Cloud Edge Services Team

Summer 2023

Software Engineer Intern

• Designed and implemented a proof-of-concept Enterprise Connector tool for linking F5XC's CDN Edge Servers with Google Cloud Storage. Received highest performance rating from manager.

UW Association for Computing Machinery (UW ACM)

2019-2023

Student Adviser, Vice Chair, Treasurer, Associate Officer

- Led the largest student-run organization at the Allen School, focused on enhancing student experiences by organizing events, such as internship panels and quarterly departmental socials.
- Spearheaded the Research Night Series, with 110 undergraduates attending to learn more about getting involved in computing research and engage with 9 attending labs at UW.
- Expanded and restructured the Big/Little Peer Mentorship Program to support the growing cohorts of 350 students, enhancing their transition to college.
- Helped lead quarterly fundraising efforts for the University District Food Bank, Code.org, Black Girls CODE, and Seattle Children's Hospital, raising a total of \$7,460 in donations.

Polling and Open Data Initiative at the University of Washington 2020-2021 Co-Founder & Technology Director, advised by Christopher S. Parker & Geoffrey P.R. Wallace

- Founded a 25-student organization that gathers, analyzes, and presents data to advance public understanding of our communities and shape their policies.
- **Key Outcome**: Analyzed 3,769 student responses from UW's tri-campus survey on remote learning experiences and opinions, providing policy recommendations to the UW Board of Regents [PDF] on post-pandemic education practices.
- Other Communities & Organizations Served: Paul G. Allen School of Computer Science & Engineering [PDF], Associated Students of the University of Washington [PDF] and Washington State Parks Foundation, providing data-driven insights and policy recommendations.

Associated Students of the University of Washington (ASUW)

2019-2020

Student Senator & Member of the Student Technology Fee (STF)

- Lobbied state legislators at the Washington State Capitol on higher education issues.
- Oversaw the funding of 13 technology project proposals through STF's \$10 million budget during the COVID-19 pandemic (e.g., remote computing resources, departmental equipment renewals).

Service & Volunteer

Mentoring

• Ananya Aatreya, University of Washington: 2025

Reviewing

- EMNLP Workshop on Customizable NLP (CustomNLP4U): 2024
- ICWSM: 2025
- ACL Student Research Workshop (SRW): 2025

Department Committees

- Allen School Diversity Committee: 2021-2023
- Allen School Teaching-Track Faculty Recruiting Committee: 2022-2023

Volunteer

- Volunteer & Room Monitor, EMNLP Workshop on Customizable NLP: 2024
- Speaker & Organizer, UW ACM Research Night Series : 2021-2022
- Organizer, UW ACM New Student Big/Little Peer Mentorship Program: 2021-2022
- Organizer, UW ACM First / Second-Year Internship Prep Panel : 2020-2021
- Organizer, UW CSE Quarterly Departmental Socials: 2019-2023
- Panelist, Admitted Student Day Undergraduate Research Roundtable : 2022
- Panelist, CSE Direct Admit Seminar (Undergrad Research Panel): 2020, 2022
- Panelist, Allen School Spring Research Showcase: 2021

Presentations

"They are uncultured" : Unveiling Covert Harms & Social Threats in Generated Conversations. $EMNLP\ 2024\ (Oral)$, Miami FL, USA November 2024

ValueScope : Unveiling Implicit Norms and Values via Return Potential Model.

EMNLP 2024 (Poster), Miami FL, USA

November 2024

Geolocation Audit of YouTube for COVID-19 Misinformation

UW Undergraduate Research Symposium, Seattle WA, USA.

May 2023

Auditing YouTube for Misinformation Prevalent in the Global South UW DUB REU Symposium, Seattle WA, USA.

Skills

- $\hbox{\bf Computer-related:} \ Python, SQL, Java, C/C++, R, Pandas, PyTorch, Flask, Numpy, Git, Matplotlib, AWS, Azure, Javascript, NGINX, HTML/CSS \\$
- Natural Languages : English (native); Korean (fluent)