RACHEL LOWY

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RESEARCH INTERESTS

My research focuses on designing accessible and inclusive technologies that enhance learning, work, and social experiences for neurodivergent individuals. By employing a co-design approach, I strive to ensure that my design contributions resonate with the unique perspectives of neurodivergent communities, aligning closely with their interests and priorities.

EDUCATION

PhD Human-Centered Computing *2021 – 2026 (ant)*
School of Interactive Computing, Georgia Institute of Technology
Specialization: Learning Sciences Technology
Advisor: Jennifer Kim

Master of Science, Speech-Language Pathology *2013*
Department of Speech and Hearing Sciences, University of Washington
Pediatric Specialty. Externship Site: Seattle Children's Autism Center

Bachelor of Science, Speech & Hearing Sciences *2011*
University of Washington

Bachelor of Science, Psychology *2009*
University of Washington
Minor: Law, Societies, and Justice

TEACHING, ADVISING, & WORK EXPERIENCE

Graduate Teaching Assistant, Instructor of Record *Aug 2023 - present*
Georgia Institute of Technology

- ***TA, CS 3751 Introduction to UI Design.*** *Spring 2024.* Led a weekly studio group for ~30 undergraduates, offering lecture summaries, project design guidance, and detailed writing feedback in an introductory course on human-centered design.
- ***TA, OMCS 8001 Seminar: LLMs.*** *Summer-Fall 2024, Spring 2025.* Co-developed and co-taught a curriculum exploring human-centered LLM development for up ~150 online master's students, under the supervision of an experienced teaching professional. In this role, my co-teacher and I supported the development of student's LLM design skills, through large lectures and individual coaching meetings.
- ***Instructor of Record, INTP 3020P Collaborative Design.*** *Spring 2023, Spring 2025.* Developed a curriculum to instruct students with intellectual and developmental disabilities in human-centered design while integrating co-design opportunities. Coordinated teaching and research activities within this classroom, leading to successful publication of co-design materials created during course time while ensuring that students met educational aims of course. A paper on this novel approach to education was accepted for presentation at the CSCW conference.

Graduate Research Assistant *Aug 2021 - present*
Georgia Institute of Technology

- Conducted research planning, participant interviews, and data analysis to facilitate research studies related to neurodiversity. This work has led to the successful publication of papers at major ACM conferences, including CHI, CSCW, and ASSETS, advancing the understanding of neurodiversity in human-computer interaction.
- Employed individual and group-based co-design, semi-structured interviews, and qualitative analysis to explore the experiences of participants with intellectual and developmental disabilities, autistic participants, and neurotypical community members (teachers, co-workers, peers).

RESEARCH PROJECTS

LLMs for Inclusive Higher Education *Spring 2024-ongoing*
This project aims to improve the accessibility of higher education for students with intellectual and developmental disabilities (IDD) by building LLMs to support coursework modification. Exploring design requirements for this system, I conducted in-depth interviews with students and teaching staff to identify their needs in this space and understand how this LLMS can contribute to strength-affirming systems for students with IDD. A system will be developed and deployed based on findings to support students.

Inclusive Design Education: Building Self-Advocacy through Co-Design *Spring 2023*
With a goal of including voices of people with IDD in HCI research, I developed a course on HCI for students in an Inclusive Post-Secondary Education (IPSE) program. Students with IDD partnered with Georgia Tech researchers to co-design innovative solutions to social and work challenges, including a robot support dog and an AI job coach. This course successfully blended traditional lectures with interactive design sessions, fostering design skills among students and introducing a novel approach to co-design among students.

Technological Supports for Successful Social Interactions *2022 – ongoing*
This work explores the potential of AI chatbots to enhance social interactions between people with IDD and neurodivergent (ND) adults through the application of psychosocial approaches. Our approach combines diary and interview methodologies with ND and NT participants, aiming to create positive interactions by using AI-driven insights to help people with and without IDD have successful interactions.

Empathy-Building Virtual Reality (VR):
Toward Acceptance of Workplace Neurodiversity *2021 – 2023*
Aimed at increasing understanding, appreciation, and support for neurodivergent employees, we employed generative toolkits, interviews, participatory design of VR environments to uncover authentic participant experiences. We proposed design insights important to developing VR system that contribute to empathy that elicit positive views of neurodivergent co-workers and develop an inclusive work culture, rather than pity or negative appraisals of neurodivergent capabilities.

Web Accessibility for Independent Living *2021 – ongoing*
Web search is a critical component of pursuing independent living, however much of the web remains inaccessible to neurodivergent adults seeking employment and housing. Through semi-structured interviews and contextual inquiries, the research team sought to understand the unique challenges

faced by ND adults in accessing online resources for employment and housing, guiding the development of more accessible web solutions. This work aims to bridge the accessibility gap, promoting greater independence for neurodivergent individuals.

Person-Centered Transition Planning for Autistic Young Adults *2021 - 2022*
An exploration of innovative socio-technical systems to enhance students' autonomy in transition planning for autistic young adults in high school. Through interviews with autistic individuals, their parents, and professionals, this study provided valuable insights for technological design guidelines that support the successful transition towards self-directed futures for autistic adults.

PUBLICATIONS

1. Kong, H., **Lowy, R.** Choi, Y., Kim, J. **(conditional acceptance).** Working Together Toward Interdependence: Factors, Barriers, and Technological Support for Successful Social Interactions Among Neurodiverse People. CHI Conference on Human Factors in Computing Systems. (CHI '25),(Yokohama, Japan).

2. **Lowy, R.**, Magiawala, K., Mittal, S., Hall, K., Roberts, J. Kim, J. (2024**)**. Research-Education Partnerships: A Co-Design Classroom for College Students with IDD. Computer-Supported Cooperative Work & Social Computing (CSCW '24), (San Jose, Costa Rica)..

3. Kong, H., Xie, D., Chandra, A., **Lowy, R**., Maignan, A., Ha, S., Park, C., Kim, J. (2024). Co-designing Robot Dogs with and for Neurodivergent Individuals: Opportunities and Challenges. ASSETS 2024 Technical Papers.

4. Hall, K., Arora, P., **Lowy, R.**, Kim, J. (2024). Designing for Strengths: Opportunities to Support Neurodiversity in the Workplace. In Proceedings of the CHI Conference on Human Factors in Computing Systems. (CHI '24), (Honolulu, HI, USA). DOI: 10.1145/3613904.3642424

5. Kong, H., Yadav, S., **Lowy, R.**, Ruzinov, D., Kim, J. (2024). Understanding Online Job and Housing Search Practices of Neurodiverse Young Adults to Support Their Independence. In Proceedings of the CHI Conference on Human Factors in Computing Systems. (CHI '24), (Honolulu, HI, USA). DOI: 10.1145/3613904.3642578

6. **Lowy, R**., Lee, C. Abowd, G., Kim, J. (2023). Building Causal Agency in Autistic Students through Iterative Reflection in Collaborative Transition Planning. In Companion Publication of the 2023 Computer Supported Cooperative Work Conference & Social Computing (Milwaukee, USA). DOI: 10.1145/3610037

7. **Lowy, R**., Goa, L., Hall, K., Kim, J. (2023). Toward Inclusive Mindsets: Design Opportunities to Represent Neurodivergent Work Experiences to Neurotypical Co-Workers in Virtual Reality. Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (Hamburg Germany, Apr. 2023), 1–17. DOI: 10.1145/3544548.3581399

8. Roberts, J., **Lowy, R**., Li, H., Bellona, J., Smith, L., & Bower, A. (2023). Breaking down the visual barrier: Designing data interactions for the visually impaired in informal learning settings. In Proceedings of the 16th International Conference on Computer-Supported Collaborative Learning-CSCL 2023, pp. 253-256. International Society of the Learning Sciences. DOI: 10.22318/cscl2023.104721

ADDITIONAL SKILLS

Licenses Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP),
Licensed Speech-Language Pathologist, Washington State & Georgia

AWARDS & INVITED TALKS/TRAININGS

Chih Foundation Graduate Student Research Publication Awards 2025

ASD Learning Style Profile Series: People Oriented, Social Modeling and Cues; Flexible Interactions and Shared Agenda; Interaction Styles and Communication. **Expert Guest,** with Patrick Rydell (host)**.** Online Training, MedBridge Education, 2017.

Promoting Successful Communication in the Classroom. **Co-Presenter**. Live Presentation at Seattle Teachers Autism Symposium. August, 2015.

Enhancing Communication with AAC . **Co-Presenter**. Presentation at Tenth Annual Southeastern Washington Autism Conference, Richland, WA, 12-13 Aug. 2014.

TEACHING EXPERIENCE

Instructor of Record

Spring 2023	INTP 3020P Collaborative Design	*Excel Program, Georgia Institute of Technology*

Teaching Assistant

Spring 2024	CS 3751 Introduction to UI Design	*Georgia Institute of Technology*
Summer 2024 & *Fall 2024*	OMCS 8001 Seminar: LLMs	*Online Master's of Science in Computer Science, Georgia Institute of Technology*

ADDITIONAL SKILLS

Licenses

Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP)
Licensed Speech-Language Pathologist, Washington State & Georgia

Languages

English (Native), Spanish (Conversational)

Clinical Training

PEERS Young Adult Social Skills	*2022*
SparkLing: Building Bilingual Brains	*2017*
SOS Approach to Feeding	*2017*
PECS Level 2 (Advanced)	*2017*
ADOS-2 Clinical Training	*2015*
Social Thinking Conference	*2014,15*