RACHEL LOWY

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RESEARCH INTERESTS

My research focuses on designing accessible and inclusive technologies that enhance learning, work, and social part belonging for peole . 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 EXPERIENCE

Course Development & Instruction

INTP 3020P Collaborative Design	*Excel Program, Georgia Institute of Technology*	*Spr 2023, 2025*
OMCS 8001 Seminar: LLMs	*Online Master of Science in Computer Science, Georgia Institute of Technology*	*Sum, Fall 2024 Spr 2025*

Teaching Assistant

CS 3751 Introduction to UI Design	*Georgia Institute of Technology*	*Spr 2024*

WORK EXPERIENCE

Lead Instructor, Instructor of Record *Aug 2023 - present*
Georgia Institute of Technology

- ***TA, CS 3751 Introduction to UI Design.*** *Spring 2024.* Co-developed group project milestone assignments. Directed a weekly studio offering group project design guidance and feedback.
- ***TA, OMCS 8001 Seminar: LLMs.*** *Summer 2024, Fall 2024, Spring 2025.* Developed and led human-centered LLM seminar, supporting synchronous and asynchronous learning.
- ***Instructor of Record, INTP 3020P Collaborative Design.*** *Spring 2023, Spring 2025.* Developed a curriculum teaching human-centered design concepts to students with intellectual and developmental disabilities through co-design activities. Coordinated teaching and research activities within this classroom, leading to successful publication of 3 papers on co-design outcomes presented at major ACM conferences (CHI, CSCW, ASSETS).

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 inclusive design 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*
Design of LLM-supported system to guide instructors toward coursework modification aligned with Universal Design for Learning. In-depth interviews with students and teaching staff identified design requirements and demonstrated opportunities for LLMS to encourage strength-affirming systems for students with IDD. This work has revealed a need to balance challenge and support for IPSE students, and build alignment between IPSE staff and faculty. Interface co-design is in-progress. Deployment planned for 25/26 school year.

Inclusive Design Education: Building Self-Advocacy through Co-Design *Spring 2023, Spring 2025*
Development of a course on human-centered design for students in an Inclusive Post-Secondary Education (IPSE) program. IPSE student partnered with researchers to co-design innovative solutions to social, work, and education challenges. Co-designed solutions have included a robot support dog, an AI job coach, and an LLM platform for inclusive education. This course blends traditional lectures with interactive design sessions, fostering design skills among students and introducing a novel approach to co-design among students. This work has highlighted approaches to improve interdisciplinary design in educational environments, and align teaching and research goals in classroom settings.

Technological Supports for Successful Social Interactions *2022 – 2025*
An exploration of AI-powered chatbots aligned with psychosocial approaches to support to enhance social interactions between people with and without IDD. Our approach combined diary and interview methodologies from participants, aiming to create positive interactions by using AI-driven insights. This work revealed a need to create systems that offer pathways for interactions which invites participants engage more authentically and share the communication burden.

Empathy-Building Virtual Reality (VR):
Toward Acceptance of Workplace Neurodiversity *2021 – 2023*
Virtual Reality environments offer opportunities for empathy through perspective-taking in interactions. Through generative toolkits, interviews, and participatory scenario design, this work uncovered a need for systems 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 – 2024*
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 uncovered unique challenges faced by ND adults

in accessing online resources for employment and housing. These findings are used to guide development of more accessible web solution.

Person-Centered Transition Planning for Autistic Young Adults *2021 - 2022*
An exploration of socio-technical systems that enhance autistic students' autonomy in transition planning during high school. Through interviews with autistic individuals, their parents, and professionals, this study provided suggestions for technological design guidelines that support self-directed transitions from high school to adulthood.

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

AFFILIATIONS & HONORS

Chih Foundation Graduate Student Research Publication Award 2025
Georgia Tech AI Safety Initiative Fellow, Spring 2025

INVITED TALKS & TRAININGS

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**. 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.

ADDITIONAL SKILLS

Languages

English (Native), Spanish (Conversational)

Licenses

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

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*