

Center for Research and Education on Accessible
Technology and Experiences

CREATE



Annual Impact Report Year 5

July 2025



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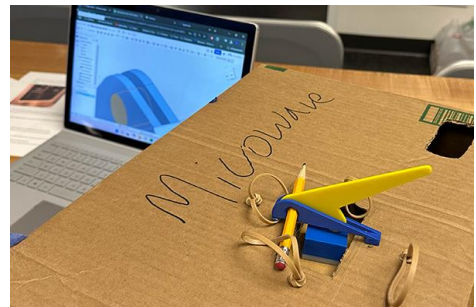
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Letter from the Director



Dear CREATE Community,

I just finished reading *Marsha: The Joy and Defiance of Marsha P. Johnson*, by Tourmaline. Johnson was a Black, trans, disabled activist, instrumental in Stonewall, which helped launch the LGBTQIA+ rights movement. She lived through the early AIDS epidemic, when queer, Black, and disabled folks organized against stigmatizing discourses and government inaction. During that time, Johnson “proved that innovation isn’t confined to reaching for the stars through technological advancements; it can include the creation of supportive communities through mutual aid, housing, and care, and it can center Blackness, transness, and nonconformity.” Today, disability, trans, and BIPOC communities similarly face erasure and the loss of essential social services, such as cuts to Medicaid and federal grants that support disability-serving organizations.

As these events impact CREATE’s community partners and the communities our work aims to serve, how should CREATE respond? After all, CREATE’s goal is to reach for the stars, by advancing accessibility technology for and with our communities. CREATE meets this moment by considering what the broader loss of funding and support essential to disabled people means for our work. Three things stand out: we must continue to listen to our community partners; we must continue to uplift those most impacted through disability justice work; and we must continue to translate our work into apps and policy guidance that support the disability community.

This year, our translational work has included everything from the release of new DIY kits to conversations with the UN about AI and human rights. Though we are proud of these successes, CREATE is still a fledgling in the disability world, still learning how best to use the resources we’ve been gifted, how to contribute to the wider world of organizations engaged in building up, rather than tearing down, the disability community. During these challenging times, we are committed to our mission and values, to play, tinkering, and self-expression, to fighting bias against and risks to disabled people, and to learning from past examples of joy and defiance.

Jennifer Mankoff, Director

CREATE awards four new grants!

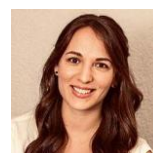
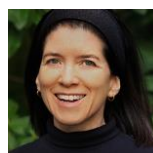
Our Race, Disability, and Technology Initiative awarded three grants this year! A Tier I grant will support studying GAI code-switching and masking by multilingual and multicultural people with disabilities, and another Tier I grant will support telemedicine for people of color with disabilities in rural Brazil. Our first-ever Tier II grant, for projects with significant community involvement in the planning and the research phases, will support community-based approaches for students of color who use assistive technology in special education settings.

CREATE awarded a seed grant to Jon Froehlich and Jacob O. Wobbrock for research on supporting mixed visual abilities families in creative activities.

New members of the CREATE community

We welcomed five new faculty members!

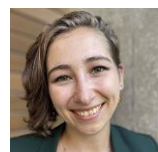
- **Cecilia Aragon**, Professor, Human Centered Design & Engineering
- **Yohali Burrola-Mendez**, Research Scientist, UW Family Medicine
- **Rania Hussein**, Assistant Teaching Professor, Computing and Networking, Data Science
- **Kevin Lin**, Assistant Teaching Professor, Paul G. Allen School of Computer Science & Engineering
- **Wanda Pratt**, Professor, The Information School and Adjunct Professor, UW Medical School, Division of Biomedical & Health Informatics



We also welcomed new postdocs!



- **Jazette Johnson, Ph.D.** A CREATE trainee, Johnson explores the impact of AI on adults and elders with intellectual and developmental disabilities—persuasive and difficult-to-detect misinformation, in particular.



- **Kelly Avery Mack, Ph.D.** A postdoc in Human Centered Design & Engineering, Mack focuses on the representation of people with disabilities in digital technologies, generative AI tools, and digital avatars, and on AI applications for accessibility that preserve user privacy.



- **Emma McDonnell, Ph.D.** A postdoc of Biomedical Informatics and Medical Engineering in the UW School of Medicine, McDonnell explores how disability studies perspectives could inform the design of health-focused technologies.

- **Tamanna Motahar, Ph.D.**, a CREATE trainee, seeks to design robotic arms to aid in self-care activities and social participation for people with no or limited upper body functionality.
- **Anthony Osuna, Ph.D.** As a postdoctoral scholar at Seattle Children's Hospital, Osuna focuses their work on advancing health equity through accessible interventions for underserved communities.
- **Bethany Sloane, Ph.D.**, a CREATE trainee, focuses on powered mobility and assistive technology interventions for young children with cerebral palsy. Sloane joins us as an associate professor at Oregon Health & Science University's Institute on Development & Disability.



Research

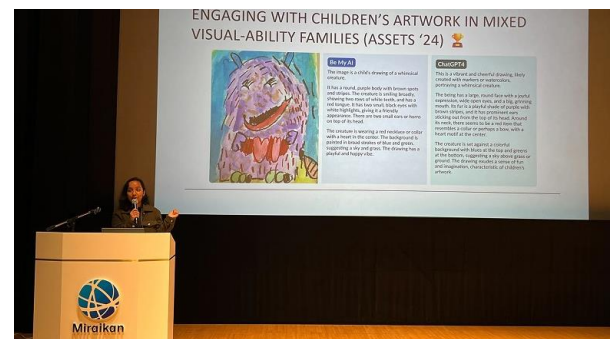
CREATE advances its mission—to *make technology accessible and make the world accessible through technology*—by supporting research that addresses accessibility needs in the disability community. Our research benefits from the varied expertise of faculty and students from the iSchool, Mechanical Engineering, Rehabilitation Medicine, Human-Centered Design, Disability Studies, Computer Science, and more.

Research impact

- CREATE research on bias in GAI resume ranking, last year cited by publications including **Forbes Magazine**, was this year cited by prominent policy organizations **American Printing House for the Blind** and the **Center for Democracy and Technology**.
- CREATE researchers were invited by **Zoom** and **Caption with Intention** to consult about possible improvements to videoconferencing and caption accessibility.
- CREATE consulted on the **UN Development Programme's 2025 Human Development Report** about advancing human development for people with disabilities. The final report cites recent CREATE research as well as earlier research by CREATE researchers about disability studies perspectives on assistive technologies.

Research accolades

- Associate Director **James Fogarty** is a new member of the **SIGCHI Academy**! This award recognizes his achievements in HCI research. Fogarty's accessibility research has achieved real world impact, including a large-scale study of app accessibility cited by the Department of Justice and research on runtime repair of mobile app accessibility features that informed Apple's pixel-based Screen Recognition.
- CREATE had another strong showing at this year's **CHI**, **RESNA**, **ASSETS**, and **MobileHCI conferences**—with faculty and Ph.D.s winning 8 awards and honorable mentions for their papers and demos!
- Our researchers published **54 peer-reviewed accessibility papers** this year, 24 of them supported by CREATE!



GRANTS AWARDED SINCE 2020

59

Total grants awarded

29

Seed Grants

14

Student Minigrants

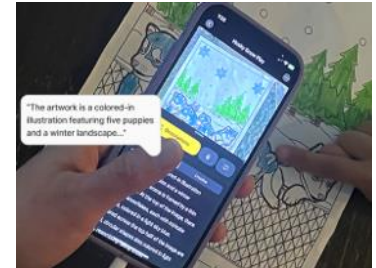
Values-driven research

In addition to supporting research that serves the disability community and combines expertise across multiple disciplines, we support research driven by the following values:

Disability-led

Our research is guided by the principle “nothing about us without us.” Work this past year led by researchers with disabilities included:

- an autoethnography of neurodiverse “power-users” of GAI
- a study of how multilingual people with disabilities experience captioning
- a study of how blind and low-vision people interact with digital and tangible crafting media



Agency for people of all ages with disabilities

Our research supports the agency of people of all ages with disabilities. This past year, our researchers worked to improve agency for people with disabilities across all life stages!



- **Children:** Katherine Steele, Heather Feldner, and Kim Ingraham lead teams dedicated to understanding and enabling on-time mobility for children with disabilities. The teams are extending their work to other developmental disabilities and new assistive technology to support play and movement, including Ph.D. student Mia Hoffman 's work with children with Down Syndrome.
- **Elders:** Maya Cakmak works to enhance independence for older people through robotics.
- **Intergenerational:** Jon Froehlich and Jacob O. Wobbrock's work on mixed visual abilities families connects children and adults engaging in creative activities together.

Inclusion of multiple perspectives

Our research works to ensure that the future of accessible technology is inclusive. This year, CREATE advanced the inclusion of multiple perspectives through projects including:

- Postdoc Stacy Hsueh's research at Seattle's Open Doors for Multicultural Families identified how families receiving support for disabled children navigate state-funded support systems that do not always account for their cultural diversity.
- Ph.D. student Aaleyah Lewis, with advisors James Fogarty and Julie Kientz, explored whether AI can support speech-language pathologists in delivering equitable care to culturally and linguistically diverse children with disabilities.



Translation

Our translation efforts center on moving CREATE research—including new knowledge, methods, software, data, and apps—into community, industry, and policy settings, and to enhance CREATE research through community and industry input.



Translation events

- On Community Day, CREATE hosted experts from academia, industry, and nonprofits to discuss how to bring research into the world. We were joined by Kirk Adams, Michael Bervell, Mary Goldberg, Wilson Ng, and Michelle Williams.
- Shaun Kane, Google Research scientist, met with CREATE students to discuss their research and presented on accessibility at the DUB seminar.
- Hrvoje Benko, Director of Research Science at Meta Reality Labs Research, also met with CREATE students to discuss their research.

Tools you can use!

This past year, CREATE researchers introduced the following research-based projects into the community.

For researchers and data scientists:

CREATE Associate Director Leah Findlater and co-authors (including a CREATE Ph.D. student) published a dataset challenge for the [VizWiz Grand Challenge Workshop 2025](#). The challenge drew on their published work about creating a dataset for blind and low vision people that preserves their privacy during image identification processes.

For DIYers:

Check out the [SwitchKit](#)! A customizable kit, it opens up unlimited accessibility possibilities! SwitchKit works with both commercial and homemade switches and connects to a tablet or computer so that it can be used with apps or websites. While the team developed games for SwitchKit using Scratch, a kid-friendly programming platform, it also works with other games or apps that utilize arrow keys or the space bar for input.

For DIYers and the open-source community:

CREATE is developing a central hub for information about open-source assistive technologies! Through this site, disabled makers and developers, as well as their allies and communities, will be able to find, use, and contribute to a variety of open-source accessibility projects. Updates are coming soon! For now, check out [this tutorial on accessible switches](#).

Education

CREATE works to ensure that the next generation of developers, engineers, and innovators are champions of accessibility. We support this through curriculum development, educational events, grants for student research, and faculty commitment to advancing the field of pedagogy and accessibility.



Ella Cao and Sneha Birru, members of a HuskyADAPT design team nominated for RESNA's Student Design Challenge, were awarded **CREATE student minigrants** to attend RESNA's annual conference. We're proud to announce their second-place award in this challenge!

CREATE's Mankoff, postdoc Hsueh, and Ph.D. student Lewis piloted a capstone course on the intersections of race, gender, and accessibility. The course leveraged concepts from Design and Disability Justice and required that all documents, presentations, and projects were accessible. The projects were community-led, and all groups met with a community or CREATE mentor as well as a community client with lived experience relevant to the project.

"CREATE brought me community and new knowledge about accessibility and cutting-edge technology, through our hackathons or collaborative making events such as Tinkerer Tuesdays. Importantly, as a disabled researcher, CREATE has provided opportunities for mentorship and skill-building that are important to my academic journey."

— Kate Glazko, Ph.D. student

For Global Accessibility Awareness Day 2025, CREATE postdocs Mack and McDonnell presented on the history and necessity of accessible presentations. CREATE faculty Kevin Lin hosted a workshop for instructors in all disciplines who teach courses involving programming or data analysis. Amy Ko, also CREATE faculty, delivered the workshop keynote.

CREATE established a small advocacy team and budget to support disabled CREATE students and faculty who are experiencing temporary barriers to accommodations. This pilot program is called A11y Bridge Funding.

Student resource organization: HuskyADAPT

HuskyADAPT works to improve accessibility and inclusivity for individuals with disabilities. This year, the Toy Adaptation program organized 15 adapting events, certified 18 Lead Toy Adapters (for a total of 47), and adapted a record number of toys, 141. A holiday hackathon provided 40 switch-adapted toys through Emma's Exceptional Equipment Exchange. Mentored by postdocs Hsueh and Sloane, HuskyADAPT led events at King County Library System Bellevue Makerspace and adapted books for local schools and families. They also expanded their switch-building workshops to include a local Girl Scouts troop and the Microsoft Inclusive Tech Lab.



Congratulations to our Ph.Ds. and postdocs as they move on to advance accessibility everywhere!

Anant Mittal received his Ph.D. from the Allen School of Computer Science. During his program, Mittal, advised by James Fogarty, worked on the design and development of Jod, a videoconferencing platform for mixed hearing groups. Mittal's thesis focused on systems for communication, collaboration, and coordination in complex settings, such as interactions among people with and without disabilities and patients with chronic conditions collaborating with providers for care.



As a CREATE trainee, **Dr. Tamanna Motahar** worked with advisor Maya Cakmak to design robotic arms to aid in self-care activities and social participation for people with no or limited upper body functionality. Motahar is moving to a position as the Patrick Clark Endowed Assistant Professor in the School of Computing and Informatics at the University of Louisiana at Lafayette.



Postdoc Kelly Avery Mack, a previous CREATE Ph.D. student, will continue their accessibility research as an Apple AI/ML Resident. During their graduate and postdoctoral work, Mack has advanced research into the representation of people with disabilities in digital technologies, generative AI tools, and digital avatars, and AI applications for accessibility while preserving user privacy.



Dr. Anthony Osuna, a recent CREATE postdoc, focuses on advancing health equity through accessible interventions for underserved communities. Osuna will become an Acting Assistant Professor in the UW Department of Pediatrics, where he will continue to work on digital safety for people with intellectual and developmental disabilities.



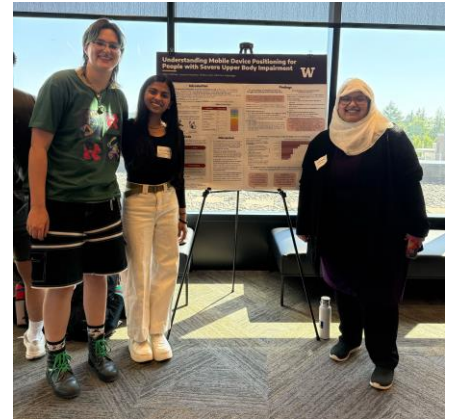
Events

Spanning both its educational and translational missions, CREATE's events bring students, faculty, and community members together to learn from one another.

Community Day and Research Showcase

CREATE's annual Community Day fosters conversation and collaboration across communities. The event began with two panel discussions: *technology, accessibility, and the legal landscape* and *translating research into the world*. It concluded with a research showcase where attendees explored accessibility research and development at the UW.

This year's showcase, co-sponsored by HuskyADAPT, featured over 60 undergraduate and graduate students presenting research posters and live demos of their accessibility-focused research projects to a vast array of faculty, partners, community members, and students.



Josh Miele's *Connecting the Dots: A Blind Life*

CREATE held a book talk with friend of CREATE Josh Miele, who spoke about his recently published memoir about his life as a blind technologist. In conversation with CREATE's Jennifer Mankoff, Miele discussed what drew him to engineering, his advocacy, and what his past means to him today as a technologist.

Community Hackathon with KCLS

CREATE, HuskyADAPT, and the Washington Assistive Technology Act Program partnered with King County Library System to host our annual hackathon event in their Bellevue makerspace.



Local community members learned about DIY fabrication methods. Six teams designed adaptations to everyday challenges for people with disabilities, including a portable bidet for safe toileting outside the home; a white cane modification for someone with a repetitive strain injury in the hand or wrist; and a microwave button pushing method that requires significantly less force.

Guest speakers

- Postdoc Tamanna Motahar hosted **Dr. Ishtiaque Ahmed** (U Toronto) for a discussion about accessibility research with underrepresented populations, particularly in developing countries.
- Postdoc Jazette Johnson discussed key principles in community-engaged research with guest **Dr. Mark Baldwin** (CSULA).
- CREATE and the UW Tech Policy Lab co-sponsored a visit by **Dr. Jonathan Lazar** (U. Maryland and CREATE Advisory Board member), who discussed his career trajectory and his forthcoming book on HCI and U.S. law.

Partnerships

CREATE's partnerships provide support for our students, our research, and our translation efforts. This year, we forged important new relationships with several disability-focused organizations. The development of new regional and national partnerships has strengthened our Community Partners Program's ability to provide valuable connections between our researchers and a wider, more diverse array of communities.

"NSITE is proud to partner with UW CREATE's talented Ph.D. researchers to advance cutting-edge technologies that empower blind and visually impaired professionals to thrive in their careers. Through this collaboration, we're driving innovative research that transforms workplace accessibility and expands career opportunities for the blind and visually impaired community."

— Doug Goist, NSITE Workforce Development Program Manager

22

Active community partnerships

80%

Increase in statewide, regional, and national partnerships



Community conversations

This year we launched a new quarterly event where community leaders share with students and faculty their expertise about community needs in disability research.

Our inaugural guest for this event, **Kimberly Meck, Director of the Disability Empowerment Center**, explored best practices, answered student questions, and provided concrete examples of ways students can improve their community-engaged research practices.

Stakeholder engagement

In addition to our annual meeting of our community stakeholders, this year we also evaluated the project assistance process through a community partner feedback survey. Developed in fall 2024, the survey aimed to understand partners' experiences around CREATE students and postdoctoral fellows' requests for project support. The results, which were reviewed by our Community Advisory Council, will help guide improvements to this important component of the Community Partners Program. This year we also developed processes to ensure that the results of our community-engaged research are made available not just to the participating communities but also to the wider public, through the use of plain language summaries.

Looking Forward to Year 6!

Research

This year, CREATE focused on maturing and deepening its work in areas such as AI + Accessibility and intersectional research. This included expanding our network of collaborators and funders, our community partnerships in these areas, and our policy impact. For example, we launched a new collaboration with Microsoft exploring the accessibility of AI-generated code and a new collaboration with GitHub centered on our efforts to collect and disseminate open-source accessibility technology through a11yhood.org. Our goal in this work is to achieve translational impact without sacrificing the research impact that helps us look to the future and advance science by and for people with disabilities.

Education

Two of our goals from last year remain on our list: increasing applications for student minigrant awards and expanding our existing accessibility courses into a degree option. We did meet a different goal—holding community-engaged research events—and we will continue to program those. We created a new grant award: bridge funding for students and faculty awaiting accommodations. Our long-term goals include expanding our alumni network in ways that showcase CREATE's lasting impact through placement of graduated students and continued applications for training grants to support the inclusion of people with disabilities in technology development.

Translation

This year we connected the world with our research through conversations with industry experts, nonprofit leaders, and academics from across the country. We also connected our research with the world through new local, regional, and national partnerships. Going forward, both in the near and long term, we will further our efforts to broaden our reach. On campus, we will work with campus partners to co-sponsor events that reach new audiences and with campus leaders to implement staff and student community engagement training with a disability focus. For the wider community, we will promote usable CREATE research results such as tools and DIY kits; post accessible, plain-language summaries of our work; and use these summaries as the basis for a searchable research impact database.

LEARN MORE!

Visit [CREATE's website](#) to find out more, including how you can [support our work!](#)

Thank you for your support in Year 5!

CREATE thanks the following for their financial support this year:

Microsoft
Google
Apple
GitHub

The Richard Family
Donna Sakson

CREATE thanks the following individuals and organizations for their support this year:

Advisory Board members

- Shaun Kane, Google Research
- Ebele Okoli, Microsoft
- Amy Hurst, NYU
- Jonathan Lazar, UMD
- ChrisTiana ObeySumner, Epiphanies of Equity

Community Advisory Council

- George Abbott, CEO, Lighthouse for the Blind Inc., Seattle
- Kimberly Meck, Executive Director, Disability Empowerment Center
- Devin Myers, Client Advocate, Hearing, Speech, and Deaf Center
- Kenny Salvini, Co-founder and President, The Here and Now Project

Project support partners

- American Parkinson Disease Association, NW Chapter
- Bellevue School District
- Disability Empowerment Center
- Hearing, Speech, and Deaf Center
- Here and Now Project

- King County Library System
- Lighthouse for the Blind Inc., Seattle
- NSITE
- Open Doors for Multicultural Families
- PAVE
- Sound Generations
- Summit Community Center
- Washington Accessible Technology Act Program
- Washington Council of the Blind
- Washington Department of Services for the Blind
- Washington Talking Book and Braille Library

Community Day speakers

- Kirk Adams, Innovative Impact
- Michael Bervell, TestParty
- Mary Goldberg, IMPACT Center
- Jonathan Lazar, UMD
- Wilson Ng, IDRAC Business School
- Lee Tremblay, Center for Reproductive Rights
- Michelle Williams, M.A.W. Consulting

The following grants supported CREATE's operations, research, and training this year:

The National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS), provides funding for CREATE through grant numbers 90REGE0026-01-00 and 90ARCP0005.¹

CREATE receives support through a National Science Foundation (NSF) Information and Intelligent Systems grant (2327136) and was receiving support through an NSF Equity for Excellence in STEM grant (2347367). The latter grant was unilaterally rescinded in Spring 2025.

¹The contents of this document do not necessarily represent the policy of NIDILRR, ACL, or HHS, and you should not assume endorsement by the Federal Government.