

# Steven M. Goodman

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Curriculum Vitae (May 2025)

## About Me

I am a recent Ph.D. graduate from Human Centered Design & Engineering at the University of Washington, specializing in accessibility and human-centered AI. My dissertation explored personalizable sound recognition tools for Deaf and hard of hearing users through interactive machine learning, resulting in several publications at top HCI venues (CHI, ASSETS, IMWUT). Previously, at Google Research, I led the design and evaluation of an AI-enhanced support tool for writers with dyslexia. As an undergraduate, I supported the development of wearable sensing systems at NASA and the University of Minnesota.

I have expertise in mixed-methods user research (studies, interviews, usability testing), iterative design and prototyping (wireframing, web applications, wearables), and translating findings into actionable design guidance to a range of stakeholders in academic and industry contexts. More broadly, I am passionate about all issues at the intersection of AI and accessibility, including AI's promise and pitfalls for people with disabilities; AI fairness and alignment; and end-user agency and trust in AI systems.

I am seeking industry roles where I can leverage my User Research experience to build impactful technologies. Also open to adjacent roles in accessibility, interaction design, UX/UI engineering, and usability.

## Education

2018 - 2024	<b>DOCTOR OF PHILOSOPHY in Human Centered Design &amp; Engineering</b> University of Washington, Seattle, WA Dissertation: <i>"Human-Centered Sound Recognition Tools for Deaf and Hard of Hearing Users"</i> <a href="#">Advisor: Dr. Leah Findlater</a>
2018 - 2024	<b>MASTER OF SCIENCE in Human Centered Design &amp; Engineering</b> University of Washington, Seattle, WA
2014 - 2018	<b>BACHELOR OF SCIENCE in Mathematics</b> University of Minnesota, Minneapolis, MN

## Professional Experience

Dec. 2024 - Present	<b>A.I. CONSULTANT, Range Digital</b> Remote   Minneapolis, MN <i>Part-time advisory role with digital marketing agency leveraging expertise in user research and AI/ML to identify opportunities and develop prototypes for predictive and generative AI (e.g., LLM-driven content tools, LTV modeling).</i>
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Sept. 2018 - Dec. 2024	<p><b>RESEARCH ASSISTANT, Inclusive Design Lab</b> University of Washington, Seattle, WA <b>Advisor: Dr. Leah Findlater</b> <i>Led research to advance sound awareness tools for d/Deaf and hard of hearing users, including building prototypes, designing study protocols, coordinating research participants, running user study sessions, analyzing qualitative and quantitative data, and writing academic research papers.</i></p>
Sept. 2021 - April 2022	<p><b>RESEARCH INTERN / STUDENT RESEARCHER, People + AI Research (PAIR) Team</b> Google Research, Seattle, WA <b>Mentor: Dr. Meredith R. Morris</b> <i>Led research exploring large language models (LLMs) to assist writers with dyslexia. Included the development of an AI-infused web application for email-writing support followed by a user study with dyslexic participants. Resulted in publications at ASSETS and CACM.</i></p>
June 2015 - May 2018	<p><b>RESEARCH ASSISTANT, Wearable Technology Lab</b> University of Minnesota, Minneapolis, MN <b>Mentor: Dr. Lucy E. Dunne</b> <i>Developed process for conversion of PCB designs to stitch patterns for electronic textiles, leading to Honorable Mention at ISWC 2017.</i></p>
Summer 2017	<p><b>RESEARCH INTERN, Space Suit Assembly Team</b> NASA Johnson Space Center, Houston, TX <b>Mentor: Ian Meginnis</b> <i>Assisted in human factors evaluation of operational effort for next-generation Z-2 spacesuit based on CO2 expenditure.</i></p>
Summer 2016	<p><b>RESEARCH INTERN, Wearable Electronics Application and Research Lab</b> NASA Johnson Space Center, Houston, TX <b>Mentor: Cory Simon</b> <i>Redesigned personal CO2 monitor housing to improve wearability in microgravity, expedite assembly, and accommodate new hardware.</i></p>

## Publications

2025	<p><sup>17</sup> <b>SPECTRA: PERSONALIZABLE SOUND RECOGNITION FOR DEAF AND HARD OF HEARING USERS THROUGH INTERACTIVE MACHINE LEARNING</b> <b>Steven Goodman</b>, Emma McDonnell, Jon E. Froehlich, Leah Findlater <a href="#">ACM CHI 2025</a> (<a href="#">PDF</a>   <a href="#">Talk</a>   <a href="#">Demo</a>   <a href="#">doi</a>)</p>
2024	<p><sup>16</sup> <b>HUMAN-CENTERED SOUND RECOGNITION TOOLS FOR DEAF AND HARD OF HEARING USERS</b> <b>Steven Goodman</b> <a href="#">Doctoral Dissertation, University of Washington</a> (<a href="#">PDF</a>   <a href="#">ProQuest</a>)</p>
2023	<p><sup>15</sup> <b>LAMPOST: AI WRITING ASSISTANCE FOR ADULTS WITH DYSLEXIA USING LARGE LANGUAGE MODELS</b> <b>Steven Goodman</b>, Andy Coenen, Aaron Donsbach, Tiffanie N. Horne, Michal Lahav, Robert MacDonald, Rain Breaw Michaels, Ajit Narayanan, Mahima Pushkarna, Rachel Sweeney, Meredith Ringel Morris <a href="#">Communications of the ACM Vol. 67, No. 9</a> (<a href="#">PDF</a>   <a href="#">doi</a>)</p>

- 2022
- 14 **“EASIER OR HARDER, DEPENDING ON WHO THE HEARING PERSON IS”: CODESIGNING VIDEOCONFERENCING TOOLS FOR SMALL GROUPS WITH MIXED HEARING STATUS**  
Emma McDonnell, Soo Hyun Moon, Lucy Jiang, *Steven Goodman*, Raja Kushalnagar, Jon E. Froehlich, Leah Findlater  
[ACM CHI 2023](#) ([PDE](#) | [doi](#))
- 13 **LAMPOST: DESIGN AND EVALUATION OF AN AI-ASSISTED EMAIL WRITING PROTOTYPE FOR ADULTS WITH DYSLEXIA**  
*Steven Goodman*, Andy Coenen, Aaron Donsbach, Tiffanie N. Horne, Michal Lahav, Robert MacDonald, Rain Breaw Michaels, Ajit Narayanan, Mahima Pushkarna, Rachel Sweeney, Meredith Ringel Morris  
[ACM ASSETS 2022](#), [Best Paper Honorable Mention](#) ([PDE](#) | [Talk](#) | [doi](#))
- 12 **SOUNDWATCH: DEEP LEARNING FOR SOUND ACCESSIBILITY ON SMARTWATCHES**  
Dhruv Jain, Hung Ngo, Pratyush Patel, *Steven Goodman*, Khoa Nguyen, Rachel Grossman-Kahn, Leah Findlater, Jon Froehlich  
[Communications of the ACM Vol. 65, No. 6](#) ([PDE](#) | [doi](#))
- 11 **PROTOSOUND: A PERSONALIZED, SCALABLE SOUND RECOGNITION SYSTEM FOR D/DEAF AND HARD-OF-HEARING USERS**  
Dhruv Jain, Khoa Nguyen, *Steven Goodman*, Rachel Grossman-Kahn, Hung Ngo, Aditya Kusupati, Ruofei Du, Alex Olwal, Leah Findlater, Jon Froehlich  
[ACM CHI 2022](#) ([PDE](#) | [Demo](#) | [doi](#))
- 2021
- 10 **TOWARD USER-DRIVEN SOUND RECOGNIZER PERSONALIZATION WITH PEOPLE WHO ARE DEAF OR HARD OF HEARING**  
*Steven Goodman*, Ping Liu, Dhruv Jain, Emma J. McDonnell, Jon Froehlich, Leah Findlater  
[ACM IMWUT 2021](#) ([PDE](#) | [Talk](#) | [doi](#))
- 9 **SOCIAL, ENVIRONMENTAL, AND TECHNICAL: FACTORS AT PLAY IN THE CURRENT USE AND FUTURE DESIGN OF SMALL-GROUP CAPTIONING**  
Emma McDonnell, Ping Liu, *Steven Goodman*, Raja Kushalnagar, Jon Froehlich, Leah Findlater  
[PACMHCI CSCW 2021](#), [Honorable Mention](#) ([PDE](#) | [doi](#))
- 2020
- 8 **EVALUATING SMARTWATCH-BASED SOUND FEEDBACK FOR DEAF AND HARD-OF-HEARING USERS ACROSS CONTEXTS**  
*Steven Goodman*, Susanne Kirchner, Rose Guttman, Dhruv Jain, Jon Froehlich, Leah Findlater  
[ACM CHI 2020](#) ([PDE](#) | [doi](#))
- 7 **SOUNDWATCH: EXPLORING SMARTWATCH-BASED DEEP LEARNING APPROACHES TO SUPPORT SOUND AWARENESS FOR DEAF AND HARD OF HEARING USERS**  
Dhruv Jain, Hung Ngo, Pratyush Patel, *Steven Goodman*, Leah Findlater, Jon Froehlich  
[ACM ASSETS 2020](#), [Best Artifact Award](#) ([PDE](#) | [doi](#))
- 6 **HOLOSOUND: COMBINING SPEECH AND SOUND IDENTIFICATION FOR DEAF OR HARD OF HEARING USERS ON A HEAD-MOUNTED DISPLAY**  
Ru Guo, Robin Yiru Yang, Johnson Kuang, Xue Bin, Dhruv Jain, *Steven Goodman*, Leah Findlater, Jon Froehlich  
[ACM ASSETS 2020](#) ([PDE](#) | [Demo](#) | [doi](#))
- 5 **FIELD STUDY OF A TACTILE SOUND AWARENESS DEVICE FOR DEAF AND HARD OF HEARING USERS**  
Dhruv Jain, Brendon Chiu, *Steven Goodman*, Chris Schmandt, Leah Findlater, Jon Froehlich  
[ACM ISWC 2020](#) ([PDE](#) | [doi](#))

- 2019
- 4 **HOMESOUND: AN ITERATIVE FIELD DEPLOYMENT OF AN IN-HOME SOUND AWARENESS SYSTEM FOR DEAF OR HARD OF HEARING USERS**  
 Dhruv Jain, Kelly Mack, Akli Amrous, *Steven Goodman*, Matt Wright, Leah Findlater, Jon Froehlich  
[ACM CHI 2020](#) ([PDE](#) | [doi](#))
- 3 **SOCIAL TENSIONS WITH HEAD-MOUNTED DISPLAYS FOR ACCESSIBILITY**  
*Steven Goodman*, Dhruv Jain, Jon Froehlich, Brock Craft, Leah Findlater  
[ACM CHI 2019, Social HMD Workshop](#) ([PDE](#))
- 2 **FAIRNESS ISSUES IN AI SYSTEMS THAT AUGMENT SENSORY ABILITIES**  
 Leah Findlater, *Steven Goodman*, Yuhang Zhao, Shiri Azenkot, Margot Hanley  
[ACM SIGACCESS Accessibility and Computing, Oct 2019, Issue 125](#) ([PDF](#) | [doi](#))
- 2017
- 1 **SURFACE-MOUNT MANUFACTURING FOR E-TEXTILE CIRCUITS**  
 Md. Tahmidul Islam Molla, *Steven Goodman*, Nicholas Schleif, Mary Ellen Berglund, Cade Zacharias, Crystal Compton, Lucy E. Dunne  
[ACM ISWC 2017, Honorable Mention \(top 3% of submissions\)](#) ([doi](#))

## Teaching Experience

- Spring 2020
- TEACHING ASSISTANT, Accessibility and Inclusive Design (HCDE 598A)**  
 Dept. of Human Centered Design and Engineering, University of Washington, Seattle, WA  
 Instructor: Dr. Leah Findlater
- Fall 2019
- TEACHING ASSISTANT, Interactive Systems Design and Technology (HCDE 310A)**  
 Dept. of Human Centered Design and Engineering, University of Washington, Seattle, WA  
 Instructor: Dr. Sean Munson

## Selected Awards and Honors

- 2022
- HONORABLE MENTION, 2022 ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '22)**  
*Goodman*, Coenen, Donsbach, Horne, Lahav, MacDonald, Michaels, Narayanan, Pushkarna, Sweeney, Morris. "LaMPost: Design and Evaluation of an AI-assisted Email Writing Prototype for Adults with Dyslexia"
- 2020
- GRADUATE RESEARCH FELLOWSHIP, National Science Foundation (est. \$138,000)**  
*NSF GRFP*. Awarded to top graduate student applicants in NSF-supported STEM fields. Provides financial support in the form of a stipend and tuition waiver.
- BEST ARTIFACT AWARD, 2020 ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '20)**  
 Jain, Ngo, Patel, *Goodman*, Findlater, Froehlich. "SoundWatch: Exploring Smartwatch-based Deep Learning Approaches to Support Sound Awareness for Deaf and Hard of Hearing Users." ([Forbes](#) | [Yahoo News](#) | [UW News](#))

- 2019 | **RUNNER UP, Madrona Prize**  
Jain, Mack, **Goodman**, Findlater, Froehlich. "HomeSound: Exploring Sound Awareness in the Home for People Who Are Deaf and Hard of Hearing." University of Washington. ([Bloomberg](#) | [GeekWire](#))
- 2018 | **UNDERGRADUATE RESEARCH OPPORTUNITIES GRANT, University of Minnesota (\$1,800)**  
**Goodman**, Dunne. "Haptic Feedback Garments for Visual Accessibility."
- 2017 | **HONORABLE MENTION, 2017 ACM International Symposium on Wearable Computers (ISWC '17)**  
Molla, **Goodman**, Schleif, Berglund, Zacharias, Compton, Dunne. "Surface-Mount Manufacturing for E-Textile Circuits." Top 3% of submissions.
- 2014 -  
2018 | **SCHOLARSHIPS, University of Minnesota**  
Merit-based awards from the Tozer Foundation (\$10,000), A. & A. Berggren (\$8,000), Lemberg Engineering (\$4,000).