

Kelly Mack

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📁 [kmack3.github.io](https://github.com/kmack3)

Education

- 2019–Present **University of Washington, Seattle, WA.**
Ph.D. in Computer Science
Advised by Jennifer Mankoff
- 2014–2019 **University of Illinois at Urbana-Champaign, Urbana, IL.**
B.S. in Computer Science; Mathematics and Business minors

Publications

- 1 **What Do We Mean by "Accessibility Research"? A Literature Survey of Accessibility Papers in CHI and ASSETS from 1994 to 2019 (CHI '21)**— K. Mack, E. McDonnell, D. Jain, L. Wang, J. E. Froehlich, L. Findlater.
- 2 **Stitching Together the Experiences of Disabled Knitters (CHI '21)**— T. Gotfrid, K. Mack, K. Lum, E. Yang, J. Hodgins, S. Hudson, J. Mankoff.
- 3 **The Right to Help and the Right Help: Fostering and Regulating Collective Action in a Medical Making Reaction to COVID-19 (CHI '21)**— M. Hofmann, U. Lakshmi, K. Mack, R. Arriaga, S. Hudson, J. Mankoff.
- 4 **Medical Maker Response to COVID-19: Distributed Manufacturing Infrastructure for Stopgap Protective Equipment (CHI '21)**— U. Lakshmi, M. Hofmann, K. Mack, S. Hudson, J. Mankoff, R. Arriaga.
- 5 **Social App Accessibility for Deaf Signers (CSCW '20)**— K. Mack, D. Bragg, M. Ringel Morris, M. W. Bos, I. Albi, A. Monroy-Hernández.
- 6 **Benchmarking Spreadsheet Systems (SIGMOD '20)**— S. Rahman, K. Mack, M. Bendre, R. Zhang, K. Karahalios, A. Parameswaran.
- 7 **HomeSound: An Iterative Field Deployment of an In-Home Sound Awareness System for Deaf or Hard of Hearing Users (CHI '20)**— D. Jain, K. Mack, A. Amrous, M. Wright, S. Goodman, L. Findlater, and J. E. Froehlich.
- 8 **Anti-Freeze for Large and Complex Spreadsheets: Asynchronous Formula Computation (SIGMOD '19)**— M. Bendre, T. Wattanawaroon, K. Mack, K. Chang, and A. Parameswaran.
- 9 **Faster, higher, stronger: Redesigning spreadsheets for scale. (ICDE '19)**— M. Bendre T. Wattanawaroon, S. Rahman, K. Mack, Y. Liu, S. Zhu, Y. Lu et al.
- 10 **Characterizing Scalability Issues in Spreadsheet Software using Online Forums (CHI EA '18)**— K. Mack, J. Lee, K. Chang, K. Karahalios, and A. Parameswaran.

Awards

- 1 Google Lime Scholar (2020)
- 2 NSF Graduate Research Fellowship Recipient (2019)
- 3 ARCS Foundation Scholar (2019-2021)
- 4 Wilma Bradley Endowed Fellowship in Computer Science & Engineering (2019)
- 5 UIUC Bronze Table (2019)- top 3% of class
- 6 Boeing Women in Engineering Scholarship (2018)
- 7 NVIDIA John Nickolls Memorial Scholarship (2018)
- 8 Snap Inc. Research Scholar (2018)
- 9 CRA Outstanding Undergraduate Researcher Award Honorable Mention (2018)

Industry Experience

Jun '20 – **Microsoft Research.**

Sep '20 *Research Intern: Ability Team; Advised by Meredith Ringel Morris*

- Created interface designs in React.js to encourage engagement with and quality of alternative text for images in PowerPoint
- Performed interviews with alternative text authors and screen reader users to verify the validity of designs and further improve them
- Compiled and presented a final set of alternative text design considerations to the PowerPoint team to allow for future implementation

May '19 – **Microsoft.**

Aug '19 *Software Engineering Intern: Interaction for Everyone Team*

- Added additional functionality to Narrator, Microsoft's screen reader software, to improve the reading of math using C++ and interacting with the COM framework
- Won second place in the company-wide hackathon and first place in the M365 hackathon (project details under NDA)

Aug '18 – **Snap Inc.**

Nov '18 *Research Intern: App Platform Team; Accessibility Evangelist*

- Led an accessibility-themed research project looking at how deaf and hard of hearing users interact on social media
- Created an interview protocol and survey to answer our research questions
- Learned how to perform statistical analysis techniques on survey data to explore the results and performed open coding on qualitative interview responses
- Developed and delivered a presentation related to the importance of accessibility to team members, executives, and the CEO of Snap Inc.
- Instigated Snap Inc.'s first disability-focused employee resource group

May '18 – **Microsoft.**

Aug '18 *Software Engineering Intern: Platform Health Team*

- Built a web application using the ASP.NET MVC framework to correlate user feedback with available data to help diagnose the root cause of issues on Windows devices
- Applied basic natural language processing techniques to link the text from user feedback to concrete scenarios we can further investigate
- Participated in a hackathon project with members of Microsoft Research to create a novel experience for Narrator screen reader users
- Created and delivered a presentation to my team explaining the importance and benefits of making all of our content and applications accessible

May '17 – **Facebook.**

Aug '17 *Software Engineering Intern: Accessibility Team*

- Improved the quality of using the Facebook Android app for users with dyslexia and also the experience of newsfeed for those who use screen readers
- Updated an algorithm that determines the best alternate text for images to be read by screen readers

Leadership and Volunteer Experience

Aug '17 – **Girls Who Code.**

Present *Facilitator*

- Organize and run chapter meetings on Sundays for up to 30 girls from grades 6 through 12 by creating lesson plans and helping girls one-on-one with activities that teach them how to code
- Created and taught a workshop that educated members about what accessibility is, how to think about inclusive design, and how to design artifacts so they are accessible for people with a wide range of abilities
- Developed a series of web lectures to teach members about web accessibility including how to properly nest content, CSS guidelines, how to properly create links, and more