Kelly Mack

13802 Woodridge Lane, Orland Park, IL 60462 • 708-638-8977 • kmack3@uw.edu

Education

University of Washington (UW) — Seattle, WA
Ph.D. in Computer Science — expected Jun 2025

University of Illinois at Urbana-Champaign (UIUC) — Champaign, IL
B.S. in Computer Science; Mathematics and Business minors - GPA 3.99/4.00 — May 2019

Research Interests

- Accessibility and assistive technology, focusing on deaf or hard of hearing and visually impaired people
- Applications of fabrication in the health and sensing space

Publications

Conference Publications

- M. Bendre, T. Wattanawaroon, **K. Mack**, A. Parameswaran. Anti-Freeze for Large and Complex Spreadsheets: Asynchronous Formula Computation. SIGMOD Int'l Conf. on Management of Data, Amsterdam, The Netherlands. June 2019.
- M. Bendre, T. Wattanawaroon, S. Rahman, **K. Mack**, Y. Liu, S. Zhu, Y. Lu, P. Yang, X. Zhou, K. Chang, K. Karahalios, A. Parameswaran. Faster, Higher, Stronger: Redesigning Spreadsheets for Scale (Demo). 35th Int'l Conf. on Data Engineering (ICDE), Macau. April 2019.
- **K. Mack**, J. Lee, K. Chang, K. Karahalios, A. Parameswaran, Characterizing Scalability Issues in Spreadsheet Software using Online Forums (Case Study). *CHI '18: International Conference on Human Factors in Computing Systems,* Montreal, Canada, 2018.

Awards

- Wilma Bradley Endowed Fellowship in Computer Science & Engineering (2019)
- NSF Graduate Research Fellowship Recipient (2019)
- ARCS Foundation Scholar (2019-2021)
- UIUC Bronze Table (2019)- top 3% of class
- Boeing Women in Engineering Scholarship (2018)
- NVIDIA John Nickolls Memorial Scholarship (2018)
- Snap Inc. Research Scholar (2018)
- CRA Outstanding Undergraduate Researcher Award Honorable Mention (2018)
- Silvio and Loretta Corsetti Scholarship (2017-2018)
- Elsie Thomas Fraser Scholarship in Mathematics (2015)
- Chancellor's and James Scholar (2014-2018)

Work Experience

Snap Inc. — Redmond, WA
Research Intern-App Platform Team; Accessibility Evangelist — Aug 2018 - Nov 2018

- 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

Microsoft — Redmond, WA
Software Engineering Intern; Platform Health Team — May 2018 - Aug 2018

- 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

Facebook Menlo Park, CA

Software Engineering Intern; Accessibility Team May 2017 - Aug 2017

- 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
- Led user interview sessions to investigate how an Android feature I created could better serve disabled users

kCura Chicago, IL

Software Engineering Intern Jun 2015 - Aug 2015

- Created a new summarization field for legal documents which displays key terms to assist in document coding

UIUC Undergraduate Course Assistant Champaign, IL

Discrete Structures; Computer Architecture; Data Structures; Databases; Data Driven Discovery Jan 2015 - Present

- Responsibilities include teaching discussion sections, hosting office hours where I help students understand their code and fix errors, and creating extra study materials and assignments as needed
- Created UIUC's Data Structures class' "Problem of the Day" exercises: a collection of over 75 practice problems released daily which reinforces difficult concepts
- Created lecture slides and coding exercises for Data Driven Discovery to help non-computer science majors learn about coding and data structures

Leadership and Volunteer Experience

Girls Who Code Urbana, IL

Facilitator Aug 2017 – Present

- 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

Special Interests

- Accessibility: I have a passion for accessibility (using technology to assist people with disabilities). I took a three-part course at UIUC to earn an Accessibility Certificate, which was one of my favorite courses.
- Music: In my free time, I like to play the violin. I have been in the Illini Strings Orchestra from 2014-2018 and I play in a local church orchestra each Christmas. Some of my favorite pieces include Shostakovich's Waltz No. 2, Barber's Adagio for Strings, and Rachmaninoff's Piano Concerto No. 2. Though, my absolute favorite work will always be Tchaikovsky's Nutcracker.