

ATHER SHARIF



I use personalized and interactive tools to improve the experiences of screen-reader users in extracting information from online data visualizations while simultaneously reducing accessibility challenges that visualization creators encounter.

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EDUCATION

Ph.D. Computer Science, Paul G. Allen School, University of Washington (2018 - Present)

Concentration in **Human-Computer Interaction, Accessibility, Visualization, and Personalization**

Degree expected June 2024. GPA: 3.91

Dissertation Title: "VoxLens: Improving the Accessibility of Online Data Visualizations for Screen-Reader Users"

Committee: Jacob O. Wobbrock (Chair), Richard Ladner, Jeffrey Heer, Joanne Woaiik

M.S. Computer Science, Paul G. Allen School, University of Washington (2018 - 2021)

Concentration in **Human-Computer Interaction and Accessibility**

Degree awarded June 2021. GPA: 3.92

Thesis: "The Reliability of Fitts' Law as a Movement Model for People with and without Limited Fine Motor Function"

Committee: Jacob O. Wobbrock and Katharina Reinecke

M.S. Computer Science, Saint Joseph's University (2014 - 2016)

Concentration in **Human-Computer Interaction, Accessibility, Visualization**

Degree awarded June 2016. GPA: 4.0

Thesis: "evoGraphs - a jQuery Plugin to Create Web Accessible Graphs"

Advisor: Babak Forouraghi

B.S. Software Engineering, GIK Institute of Science and Technology, Pakistan (2007 - 2011)

Degree awarded June 2011. Position 2/38

Advisor: Zeeshan Usmani

PUBLICATIONS

Full Conference Papers

1. **Sharif, A.**, Kim, J., Xu, J. Z., & Wobbrock, J. O. (2023). "Everybody Wants to Get Better at Making Their Data Visualizations Accessible": Understanding and Reducing Visualization Creators' Accessibility Challenges. *Under Review*.
2. **Sharif, A.**, Aitharaju, N., Krishnaswamy, S. N., & Wobbrock, J. O. (2023). "It's like chalk squeaking on an old-fashioned chalkboard": An Assessment of Sonification as a Standalone Tool to Make Data Visualizations Accessible to Screen-Reader Users. *Under Review*.
3. **Sharif, A.**, Zhang, A. M., Reinecke, K., & Wobbrock, J. O. (2023). Understanding and Improving Drilled-Down Information Extraction from Online Data Visualizations for Screen-Reader Users. In Proceedings of the 20th International Web for All Conference (pp. 18-31). Best Technical Paper Award.
4. **Sharif, A.**, Ramesh, A., Yu, Q., Nguyen, T. A. H., & Xu, X. (2023). UnlockedMaps: A Web-Based Map for Visualizing the Real-Time Accessibility of Urban Rail Transit Stations. In Proceedings of the 20th International Web for All Conference (pp. 5-17).

5. **Sharif, A.**, Wang, O. H., Muongchan, A. T., Reinecke, K., & Wobbrock, J. O. (2022). VoxLens: Making Online Data Visualizations Accessible with an Interactive Javascript Plug-In. In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (pp. 1-19).
6. **Sharif, A.**, McCall, A. L., & Bolante, K. R. (2022). Should I Say “Disabled People” or “People with Disabilities”? Language Preferences of Disabled People Between Identity-and Person-First Language. In Proceedings of the 24th International ACM SIGACCESS conference on computers and accessibility (pp. 1-18).
7. **Sharif, A.**, Chintalapati, S. S., Wobbrock, J. O., & Reinecke, K. (2021). Understanding Screen-Reader Users’ Experiences with Online Data Visualizations. In Proceedings of the 23rd International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1-16).
8. Zhang, M. R., Wang, R., Xu, X., Li, Q., **Sharif, A.**, and Wobbrock, J. O. (2021). Voicemoji: Emoji Entry Using Voice for Visually Impaired People. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (pp. 1–18).
9. **Sharif, A.**, Pao, V., Reinecke, K., and Wobbrock, J. O. (2020). The Reliability of Fitts’s Law as a Movement Model for People with and without Limited Fine Motor Function. In The 22nd International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1–15).
10. Jain, D., Potluri, V., and **Sharif, A.** (2020). Navigating Graduate School with a Disability. In The 22nd International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1–11). Best Paper Nominee.

Short Conference Papers

11. **Sharif, A.**, Gan, E.F., and Wei, M. 2022. Styx++: Reliable Data Access and Availability Using a Hybrid Paxos and Chain Replication Protocol. In Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems (1–7).
12. **Sharif, A.**, and Fouraghi, B. (2018). evoGraphs — A jQuery plugin to create web accessible graphs. 15th IEEE Annual Consumer Communications & Networking Conference (pp. 1-4).
13. **Sharif, A.**, Cooney, S., Gong, S., and Vitek, D. (2015). Current security threats and prevention measures relating to cloud services, Hadoop concurrent processing, and big data. IEEE International Conference on Big Data (pp. 1865-1870).
14. Hu, W. C., Kaabouch, N., Yang, H. J., & **Sharif, A.** (2012). Location-Based Services Design and Implementation Using Android Platforms. In Midwest Instruction and Computing Symposium, Cedar Falls, IA, USA.
15. **Sharif, A.**, Minhas, A., & Usmani, Z. (2010). A Novel Approach to Solve Multiple Problems in Parallel using Swine-Flu Inspired GA. In IC-AI (pp. 1019-1024).

Poster and Demo Papers

16. **Sharif, A.**, Zhong, R., and Wang, Y. (2023). Conveying Uncertainty in Data Visualizations to Screen-Reader Users Through Non-Visual Means. In The 25th International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1-6).
17. **Sharif, A.**, Zhang, A. M., Reinecke, K., and Wobbrock, J. O. (2023). Understanding and Improving Drilled-Down Information Extraction from Online Data Visualizations for Screen-Reader Users. In 20th International Web for All Conference (pp.168–170).
18. **Sharif, A.**, Ramesh, A., Yu, Q., Nguyen, T. H., and Xu, X. (2023). UnlockedMaps: A Web-Based Map for Visualizing the Real-Time Accessibility of Urban Rail Transit Stations. In 20th International Web for All Conference (pp. 166–167). Best Artifact Award.
19. **Sharif, A.**, Zhang, A. M., Shih, A., Wobbrock, J. O., and Reinecke, K. 2022. Understanding and Improving Information Extraction From Online Geospatial Data Visualizations for Screen-Reader Users. In Proceedings of the 24th International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1–5).
20. **Sharif, A.**, Ramesh, A., Nguyen, T. H., Chen, L., Zeng, K. R., Hou, L., and Xu, X. (2022). UnlockedMaps: Visualizing Real-Time Accessibility of Urban Rail Transit Using a Web-Based Map. In Proceedings of the 24th International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1–7). Best Artifact Award.

21. **Sharif, A.**, Wang, O. H., and Muongchan, A. T. (2022). "What Makes Sonification User-Friendly?" Exploring Usability and User-Friendliness of Sonified Responses. In Proceedings of the 24th International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1–5).
22. **Sharif, A.**, Pruekcharoen, P., Ramesh, T., Shang, R., Williams, S., and Hsieh, G. (2022). "What's going on in Accessibility Research?" Frequencies and Trends of Disability Categories and Research Domains in Publications at ASSETS. In Proceedings of the 24th International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1–5).
23. **Sharif, A.**, Gopal, P., Saugstad, M., Bhatt, S., Fok, R., Weld, G., Dey, K. A. M., and Froehlich, J. E. (2021). Experimental Crowd+AI Approaches to Track Accessibility Features in Sidewalk Intersections Over Time. In The 23rd International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1–5).
24. Levy, L., Li, Q., **Sharif, A.**, and Reinecke, K. (2021). Respectful Language as Perceived by People with Disabilities. In The 23rd International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1–4).
25. Ladner, R. E., Seim, C., **Sharif, A.**, Rizvi, N., and Glasser, A. (2021). Experiences of Computing Students with Disabilities. In Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (pp. 939-940).

Workshop Papers

26. Froehlich, J. E., Eisenberg, Y., Hosseini, M., Miranda, F., Adams, M., Caspi, A., Dieterich, H., Feldner, H., Gonzalez, A., Gyves, C. D., Hammel, J., Kirkham, R., Kneisel, M., LabbÉ, D., Mooney, S. J., Pineda, V., Pinhao C., Rodriguez, A., Saha, M., Saugstad, M., Shanley, J., **Sharif, A.**, Shen, Q., Silva, C., Sukel, M., Tokuda, E. K., Zappe, S. F., and Zivarts, A. (2022). The Future of Urban Accessibility for People with Disabilities: Data Collection, Analytics, Policy, and Tools. In The 24th International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1–8).

HONORS & AWARDS

- Open Scholarship Commons Fellow, University of Washington, 2024
- Nominee, University of Washington College of Engineering Awards (Student Research), 2023
- Finalist, University of Washington 3MT Competition, 2023
- Finalist, University of Washington Bonderman Fellowship, 2023
- Accessibility Challenge Delegates' Award, Web4All Conference, 2023
- Best Technical Paper, Web4All Conference, 2023
- Google CMD-IT LEAP Dissertation Fellowship, Google, 2022
- Husky 100 Award, University of Washington, 2022
- Best Artifact Award, ASSETS, 2022
- Excellence in Entrepreneurial Leadership Award, ADA 25 Advancing Leadership Awards, 2021
- Finalist, Lime Connect Tom Wilson Leadership in Disability Awards, 2021
- Trailblazer Award, Annual DO-IT Awards, 2020
- Allen School Fellowship, Paul G. Allen School of Computer Science and Engineering, 2018
- Rising Leaders Fellow, Disability:IN, 2018
- ADA 25 Advancing Leadership Fellow, Disability Lead, 2018
- Finalist, AAPD Paul G. Hearne Leadership Awards, 2016
- Grand Marshal, Annual Philadelphia Disability Pride Walk, 2016
- The Adam Taliaferro Courage Award, Annual Taliaferro Foundation Awards, 2016

- Outstanding Graduate Computer Science Award, Saint Joseph's University, 2016
- Geek of the Year, Philadelphia Geek Awards, 2015
- Outstanding Achievement in Rehabilitation Award, Magee Patient Recognition Awards, 2015
- Most Significant Accessibility Research Delegates Award, International World Wide Web Conference, 2015
- Oliver H. M. Jordan Scholarship, Mayor's Commission Philadelphia Awards, 2015
- Google LIME Scholarship, Google, 2015
- Making A Difference' Scholarship, ABC Medical, 2015
- IBM People with Disabilities Award, Web4All Conference, 2015
- Philly ETE Opportunity Scholarship, Emerging Technologies for the Enterprise Conference, 2015
- Research Fellow, EPSCoR CyberInfrastructure Program, 2012

PRESS COVERAGE

- Nothing About Us Without Us: The Disability Gap, National Center for Women & Information Technology, 2023
- The Inclusive Code: Pursuing Equity Through Computing Education, New Degree Press, 2023
- Accessible Travel: Ather Sharif '16 (MS), Saint Joseph's University Magazine, 2023
- CREATE Open Source Projects Awarded at Web4All, UW CREATE, 2023
- Sidewalk equity, UW College of Engineering, 2022
- Allen School's Husky 100 honorees combine academic excellence and service to build a more equitable and inclusive society, Paul G. Allen School of Computer Science & Engineering, 2022
- VoxLens: Adding one line of code can make some interactive visualizations accessible to screen-reader users, UW News, 2022
- Making data visualization more accessible for blind and low-vision individuals, MIT News, 2022
- Data visualisations made more accessible to screen reader users, Cosmos Magazine, 2022
- The 2022 IDEALS Workshop, AccessComputing, 2022
- Q&A: UnlockedMaps provides real-time accessibility information for urban rail transit in six metro areas, UW News, 2022
- #CSK8 Podcast: Episode 158 - Should I Say "Disabled People" or "People with Disabilities", CSK8, 2022
- Riding public transit can be a gamble for people with disabilities. This Philly-born app makes it easier, The Philadelphia Inquirer, 2022
- App Helps Disabled People Use SEPTA, Seeks Increased Accessibility, Patch, 2022
- Vision Tech: VoxLens--A single line of code that can enable developers to make charts and graphs more accessible, American Foundation for the Blind, 2022
- Graduate Student Spotlight: Ather Sharif, UW Graduate School, 2021
- Ph.D. student Ather Sharif targets personalized design, visualizations, ableism, UW CREATE, 2021
- Check out this data viz on SEPTA's elevator accessibility, [technical.ly](#) Philly, 2019
- "Accessibility is our responsibility": Students expand their knowledge of best practices and technologies as part of Study Away Silicon Valley, Paul G. Allen School of Computer Science & Engineering, 2019

INDUSTRY EXPERIENCE

- **Senior Software Engineer, Team Lead**, Comcast. 2016 - Present.
- **Founder and Researcher**, EvoXLabs. 2014 - Present.
- **Executive Vice-Chair / Interim Chair**. Disability Empowerment Center. 2020 - Present.
- **UX/UI Research Specialist**, Azavea. August 2015 - December 2015.

PROFESSIONAL

Invited Talks

- Princeton University 2023.
- Inclusive Data Visualization Dagstuhl Seminar. 2023.
- University of Washington Foundation Board. 2023.
- National Federation for the Blind Annual Convention. 2022.

Service

- Advisory Board Member, University of Washington Office of the ADA. 2021 - Present.
- Program Committee Member, UIST. 2023.
- Program Committee Member, ASSETS. 2023.
- Co-Coordinator, University of Washington CSE Graduate Student Committee. 2018 - 2023.
- Member, University of Washington CSE Grad, VGrad, & Postdoc Advisory Council (G5PAC). 2019 - 2022.

Peer Reviewing

- ACM CHI: 2020 - 2023.
- ACM CSCW: 2022.
- ACM ASSETS: 2022 - 2023.
- IEEE CCNC: 2018 - 2020.
- ACM ToCHI: 2021.
- ACM DIS: 2022. Special Recognition for Outstanding Review.
- IEEE VIS: 2022.
- ACM UIST: 2023. Special Recognition for Highly Useful Review.
- ACM TACCESS: 2023.
- International Journal of Human-Computer Interaction (IJHCI): 2023.