

Rie Kamikubo

Researcher in HCI, AI, and Accessibility

College of Information Studies

University of Maryland, College Park

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EDUCATION

- Ph.D. Information Studies** Expected 2024
College of Information Studies, *University of Maryland, College Park*
Advisor: Hernisa Kacorri
- M.S. Information Studies** 2016
Emerging Design and Informatics Program
Graduate School of Interdisciplinary Information Studies, *University of Tokyo*
Advisor: Yoichi Sato
- B.S. Cognitive Science with Specialization in Human-Computer Interaction** 2012
Department of Cognitive Science, *University of California, San Diego*

RESEARCH EXPERIENCE

- University of Maryland**, College of Information Studies, College Park, MD 2020-Current
Research Assistant / *Advisor:* Hernisa Kacorri
- Conduct research on human-centered AI, focusing on disability representation in datasets
 - Analyzed and visualized accessibility dataset trends, bridging research findings into the deployment of a data surfacing repository *IncluSet*
 - Employed interviews, co-design, design probes, and quantitative experiments to inform ethical and accessible sharing of object recognition datasets sourced from blind people
- Microsoft Research**, New England Lab, Cambridge, MA 2022
HCI Research Intern / *Mentors:* Danielle Bragg, Alex Lu, Hal Daumé III
- Designed and led survey and co-design studies with Deaf and machine learning communities to investigate collaboration resources in sign language technology development
 - Conveyed study findings and dissemination plans as a multi-institutional joint project liaison
- Carnegie Mellon University**, Robotics Institute, Pittsburgh, PA 2019-2020
Research Associate / *Mentor:* Chieko Asakawa
- Designed and led focus groups and testing of design requirements with blind people to investigate guide robots for recreational shopping
 - Developed a Wizard-of-Oz mobile app for blind people to assess information feedback for guide robots in a simulated scenario
- Visiting Scholar / *Hosts:* Kris Kitani, Chieko Asakawa
- Collaborated with the computer vision team to deploy a turn-by-turn hospital navigation system
 - Conducted a field study with blind users to assess usability of a navigation assistant
- University of Tokyo**, Institute of Industrial Science, Tokyo, Japan 2017-2019
Project Researcher / *Mentor:* Yoichi Sato
- Designed and led a user study with blind and sighted people to inform technologies for remote guidance
 - Mentored Master's students in the design and evaluation of computer vision based visualization tools
- Sony Corporation**, R&D Center, Tokyo, Japan 2015-2017
Interaction Design Researcher
- Designed and evaluated gaze-tracking interfaces for collaborative learning
 - Explored AR/VR interaction techniques and published US patents on information processing to guide user perception in virtual environments

AWARDS AND HONORS

- Dean's Fellowship, iSchool, University of Maryland 2023
- Doctoral Student Research Award, iSchool, University of Maryland 2023
- ACM FAccT Doctoral Colloquium 2023
- International Conference Student Support Award, University of Maryland 2023
- ACM SIGCHI Gary Marsden Travel Award 2023
- Accelerator Fellowship, School of Public Policy, University of Maryland 2023
- Simmona Simmons Best Student Paper on Diversity Award, iSchool, University of Maryland 2022
- ACM ASSETS Doctoral Consortium 2021
- Healthcare Robot Research Competition Award, Hitachi, Ltd. 2018
- Graduate Student Loan Repayment Exemption, Japan Student Services Organization 2016
- Outstanding Achievement Award, Japan Student Services Organization 2016
- Provost's Honors, UC San Diego 2011-2012

PUBLICATIONS

Peer-Reviewed Conference Papers

- **Kamikubo, R.**, Lee, K., and Kacorri, H. 2023. *Contributing to Accessibility Datasets: Reflections on Sharing Study Data by Blind People*. In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'23).
- **Kamikubo, R.**, Wang, L., Marte, C., Mahmood, A., and Kacorri, H. 2022. *Data Representativeness in Accessibility Datasets: A Meta-Analysis*. In Proceedings of the 24th Int'l ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'22).
- **Kamikubo, R.**, Dwivedi, U., and Kacorri, H. 2021. *Sharing Practices for Datasets Related to Accessibility and Aging*. In Proceedings of the 23rd Int'l ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'21).
- Byers, K. M., Elsayed-Ali, S., Jarjue, E., **Kamikubo, R.**, Lee, K., Wood, R. and Kacorri, H. 2021. *Reflections on Remote Learning and Teaching of Inclusive Design in HCI*. In the 3rd Annual Symposium on HCI Education (EduCHI'21). ***All authors contributed equally.**
- **Kamikubo, R.**, Kato, N., Higuchi, K., Yonetani, R., and Sato, Y. 2020. *Support Strategies for Remote Guides in Assisting People with Visual Impairments for Effective Indoor Navigation*. In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'20).
- Charoenkulvanich, N., **Kamikubo, R.**, Yonetani, R., and Sato, Y. 2019. *Assisting Group Activity Analysis through Hand Detection and Identification in Multiple Egocentric Videos*. In Proceedings of the 24th Int'l Conference on Intelligent User Interfaces (IUI'19).
- **Kamikubo, R.**, Higuchi, K., Yonetani, R., Koike, H., and Sato, Y. 2018. *Exploring the Role of Tunnel Vision Simulation in the Design Cycle of Accessible Interfaces*. In Proceedings of the Internet of Accessible Things (W4A'18).
- Sugita, Y., Higuchi, K., Yonetani, R., **Kamikubo, R.**, and Sato, Y. 2018. *Browsing Group First-Person Videos with 3d Visualization*. In Proceedings of the ACM Int'l Conference on Interactive Surfaces and Spaces (ISS'18).
- Higuchi, K., Matsuda, S., **Kamikubo, R.**, Enomoto, T., Sugano, Y., Yamamoto, J., and Sato, Y. 2018. *Visualizing Gaze Direction to Support Video Coding of Social Attention for Children with Autism Spectrum Disorder*. In Proceedings of the 23rd Int'l Conference on Intelligent User Interfaces (IUI'18).
- **Kamikubo, R.**, Higuchi, K., Yonetani, R., Koike, H., and Sato, Y. 2017. *Rapid Prototyping of Accessible Interfaces With Gaze-Contingent Tunnel Vision Simulation*. In Proceedings of the 19th Int'l ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'17).

Peer-Reviewed Workshop Papers

- Kacorri, H., Dwivedi, U., and **Kamikubo, R.** 2020. *Data Sharing in Wellness, Accessibility, and Aging*. In NeurIPS Workshop on Dataset Curation and Security.
- **Kamikubo, R.**, Klebanov, Y., Yonetani, R., and Sato, Y. 2018. *A Case Study with Implications of the Mobile Cognitive Pupillometry Research Toolkit*. In the 35th Annual Meeting of the Japanese Cognitive Science Society (JCSS'18)
- **Kamikubo, R.**, Higuchi, K., Yonetani, R., Koike, H., and Sato, Y. 2016. *Enhancing Web Accessibility for Low Vision Users using Eye Tracking*. In IEICE Well-being Information Technology (WIT'16).

GRANTS

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| Advanced Intelligence Project Grant, Japan Science and Technology Agency, ¥1,000,000(≈\$9.1k) | 2019 |
| <i>Title: Designing Effective Remote Collaboration in Orientation and Mobility Aid</i> | |
| Miyoshi Research Grant, Foundation for the Promotion of Industrial Science, ¥600,000(≈\$5.5k) | 2018 |
| <i>Title: Technology to Support Orientation and Mobility of People with Visual Impairment</i> | |

PATENTS

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| Head Mounted Display Information Processing Apparatus, Method, and Program | 2020, 2021 |
| US Patent US20210158605A1, US Patent US20200341284A1 (Filed in 2018) | |

TALKS AND POSTERS

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| [Talk] 40th Annual HCIL Symposium, University of Maryland | 2023 |
| <i>Title: Contributing to Accessibility Datasets: A Perspective by Blind People.</i> | |
| [Poster] 39th Annual HCIL Symposium, University of Maryland | 2022 |
| <i>Title: IncluSet: A Data Surfacing Repository for Accessibility Datasets</i> | |
| [Talk, Poster] 23rd ACM SIGACCESS Conference on Computers and Accessibility
Doctoral Consortium | 2021 |
| <i>Title: Facilitating Sharing and Re-use of Accessibility Datasets: Benefits and Risks</i> | |
| [Talk] 38th Annual HCIL Symposium, University of Maryland | 2021 |
| <i>Title: Supporting Blind People in Recreational Shopping</i> | |
| [Talk] 26th Annual Innovations in Teaching & Learning, University of Maryland | 2021 |
| <i>Title: Reflections on Remote Learning and Teaching of Inclusive Design in HCI</i> | |

- [Invited Talk] Accessibility Lunch Speaker Series, Carnegie Mellon University 2019
Title: Support Strategies for Remote Guides in Assisting People with Visual Impairments for Effective Indoor Navigation
- [Poster] 35th Annual Meeting of the Japanese Cognitive Science Society 2018
Title: A Case Study with Implications of the Mobile Cognitive Pupillometry Research Toolkit
- [Poster] 19th ACM SIGACCESS Conference on Computers and Accessibility 2017
Title: Rapid Prototyping of Accessible Interfaces With Gaze-Contingent Tunnel Vision Simulation

TEACHING EXPERIENCE

- User-Centered Design: INST362 (Undergraduate Level, 50 students) Fall 2023
 Graduate Teaching Assistant. University of Maryland, College Park
 Facilitated design studios and workshops for 11 student teams in user-centered design projects.
- Human-Centered Design in Data Science Fall 2023
 Pedagogy and Curriculum Development. University of Maryland, College Park
 Designed an original course for an undergraduate social data science major.
- UMD Info Challenge Spring 2022
 Mentor. University of Maryland, College Park
 Guided 2 undergraduate data hackathon teams in problem-solving and data analytics.
- Inclusive Design in HCI: INST704 (Graduate Level, 25 students) Fall 2020
 Graduate Teaching Assistant. University of Maryland, College Park
 Assisted students with implementation and evaluation of accessible websites and co-design projects.

SERVICES

Paper Reviewer

- Frontiers in Robotics and AI, Human-Robot Interaction 2023
 ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2023
 ACM Conference on Human Factors in Computing Systems (CHI) 2022
 IEEE International Symposium on Mixed and Augmented Reality (ISMAR) 2021

Student Volunteer

- TRAILS (Institute for Trustworthy AI in Law & Society) 2024
 Human-Computer Interaction Lab (HCIL) Symposium 2023
 ACM SIGACCESS Conference on Computers and Accessibility (ASSETS) 2022
 Human-Computer Interaction Lab (HCIL) Symposium 2021

Committee Member

- ACM CHI Accessibility Co-Chair 2024
 Accessibility Studies Program, University of Maryland 2023
 Tenure Track Search in Data Visualization, University of Maryland 2022-2023