

Lisa Orie

Ph.D. Student in Computer Science & Engineering
Human-Computer Interaction, Information and Communication Technologies for Development

Paul G. Allen School of Computer Science & Engineering
University of Washington, Seattle, WA, USA

lisaorie@cs.washington.edu / 781.666.7120
lisaorie.github.io

Research Interests

I develop and evaluate mobile health (mHealth) for healthcare delivery in low- and middle-income countries (LMICs). I apply frameworks and methods from human-computer interaction (HCI). I collaborate with health researchers LMICs and Ministries of Health to prioritize the needs of local people and addressing local challenges. I am especially interested in technologies that support community-based healthcare and integrate into existing health systems.

Education

University of Washington (UW)

Ph.D. in Computer Science & Engineering
Advisor: Professor Richard Anderson

Sept 2021 – Aug 2026 (Expected)

Wellesley College

B.A. in Computer Science and Philosophy
Advisor: Professor Orit Shaer
Magna Cum Laude, Phi Beta Kappa, Sigma Xi

Sept 2017 – June 2021


University of Oxford Worcester College

Visiting student in Computer Science and Philosophy

Sept 2019 – Dec 2019

Publications

Peer-Reviewed Publications

1. **Lisa Orie**, Caryl Feldacker, Jacqueline Madalitso Huwa, Agness Thawani, Evelyn Viola, Christine Kiruthu-Kamamia, Odala Sande, Hannock Tweya, and Richard Anderson. 2024. HIV Client Perspectives on Digital Health in Malawi. In *Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI '24)*, May 11–16, 2024, Honolulu, HI, USA. ACM, New York, NY, USA, 13 pages. <https://doi.org/10.1145/3613904.3642245>
 **Best Paper Honorable Mention**
2. **Lisa Orie**, Caryl Feldacker, Hannock Tweya, Richard Anderson. eHealth Data Security and Privacy: Perspectives from Diverse Stakeholders in Malawi. To appear in *Proc. ACM Hum.-Comput. Interact.* 8, CSCW1, Article 46 (April 2024), 26 pages. <https://doi.org/10.1145/3637323>
3. **Lisa Orie**, Nami Ogawa, Yuji Hatada, and Takuji Narumi. 2022. Designing for Speech Practice Systems: How Do User-Controlled Voice Manipulation and Model Speakers Impact Self-Perceptions of Voice? In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI '22)*. Association for Computing Machinery, New York, NY, USA, Article 56, 1–14. <https://doi.org/10.1145/3491102.3502093>
4. **Lisa Orie**, Diana Tosca, Andrew L Kun, and Orit Shaer. 2021. Perceptions of Trucking Automation: Insights from the r/Truckers Community. In *13th International Conference on Automotive User Interfaces and Interactive Vehicular Applications (AutomotiveUI '21)*. Association for Computing Machinery, New York, NY, USA, 137–146. <https://doi.org/10.1145/3409118.3475154>

5. **Lisa Orie**, Diana Tosca, Andrew L Kun, and Orit Shaer. 2021. Perceptions on the Future of Automation in r/Truckers. In *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (CHI EA '21)*. Association for Computing Machinery, New York, NY, USA, Article 311, 1–6.
<https://doi.org/10.1145/3411763.3451637>
6. **Lisa Orie**, Luis Alonso, Kent Larson. Methodology for Establishing Well-Being Urban Indicators at the District Level to be used on the CityScope Platform. *Sustainability* 2020, 12, 9458.
7. Di Jin, Zhijing Jin, Joey Tianyi Zhou, **Lisa Orie**, and Peter Szolovits. Hooks in the Headline: Learning to Generate Headlines with Controlled Styles. In *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL 2020)*.

Other

1. Danielle Wood, Fohla Mouftaou, Temilola Fatoyinbo, David Lagomasino, Ufuoma Ovienmhada, Eric Ashcroft, Lelia Hampton, **Lisa Orie**, TojumiOluwa Adegboyega, Anisha Nakagawa and Juliet Wanyiri. (2019, December). Co-Designing an Environmental Observatory to Support Eco-Entrepreneurship in Benin. In *AGU Fall Meeting Abstracts* (Vol. 2019, pp. GC53B-01).

Selected Research Projects

Research methods in **blue**. Programming languages and frameworks are in **orange**.

Mobile App for Expanding Contraceptive Choice in Kenya

Oct 2023 – Present

Graduate Research Assistant

Advisors: Professor Richard Anderson (UW CSE) & Professor Elizabeth Harrington (UW Dept. of Global Health)

Developed a mobile app for Kenyan adolescent girls and young women to provide contraceptive education and decision support. Conducted co-design workshops in Kenya in Apr 2024.

Methods and Tools: **Co-Design Workshops, Human-Centered Design, Literature Review, Flutter, Dart**

Strengthening Digital Health Systems for Small and Sick Newborns

Apr 2024 – Sept 2024

Research Intern at PATH (Digital Square, Primary Health Care teams)

Advisors: Linda Taylor, Dr. Kiersten Israel-Ballard, Kimberly Mansen

Contributed to developing recommendations for digital information systems for human milk banking that strengthen newborn care programs in low- and middle-income countries.

Methods and Tools: **Human-Centered Design, Literature Review**

USSD Transaction Failures in Nigeria

Sept 2023 – July 2024

Graduate Research Assistant

Advisor: Professor Richard Anderson (UW CSE)

Designing a longitudinal repeated measures study to examine USSD reliability in Nigeria, in collaboration with the DFS Lab.

Methods and Tools: **Study Design** (ideation, recruitment planning, ethics approval), **Quantitative Methods**

Designs for Recording and Sharing Menopause Experiences Across Generations

Jan 2022 – Oct 2023

Graduate Research Assistant

Advisor: Professor James Fogarty (UW CSE)

Proposed designs and guidelines for recording and sharing menopause experiences across generations and within families.

Methods and Tools: **Study Design** (ideation, ethics approval, implementation, publication writing and submission), **Semi-Structured Interviews, Co-Design Sessions, Thematic Analysis**

Sidewalks and Socio-Demographics

Graduate Research Assistant

Advisor: Professor Jon Froehlich (UW CSE)

Mapped sidewalk presence and quality to geographic regions. Examined correlations between sidewalk characteristics and socio-demographics.

Methods and Tools: **Python**

Sept 2021 – Dec 2021

Speech Practice Systems to Improve Self-Perceptions

Undergraduate Research Assistant

Advisor: Professor Takuji Narumi (University of Tokyo)

Led the investigation of the impact of listening to speech role models and voice manipulation on the self-perception of voice. Designed and executed usability study with 18 participants.

Methods and Tools: **Study Design** (ideation, ethics approval, implementation, publication writing and submission), **Semi-Structured Interviews**, **Usability Study**, **Mixed-Methods Analysis**, **Prototyping**, **HTML/CSS/JavaScript**, **R**

Apr 2020 – May 2022

Truck Drivers' Perspectives on Automation

Undergraduate Research Assistant

Advisor: Professor Orit Shaer (Wellesley College)

Led a project that analyzed the perspective of truck drivers on automation in the trucking industry. Collected Reddit posts written by truck drivers and conducted analysis.

Methods and Tools: **Study Design** (ideation, implementation, publication writing and submission), **Thematic Analysis**, **Python**

Sept 2020 – July 2021

Developing an Urban Well-Being Index

Undergraduate Research Assistant

Advisor: Dr. Luis Alonso (MIT Media Lab)

Led the formulation of an urban metric that predicted well-being in urban environments.

Methods and Tools: **Study Design** (ideation, implementation, publication writing and submission), **Literature Review**

Jan 2020 – Dec 2020

Designing a Low-Cost Kit for Ecosystem Monitoring

Undergraduate Research Assistant

Advisor: Dr. Danielle Wood (MIT Media Lab)

Designed and engineered a sensor kit that monitored the health ecosystem in Benin with low-cost sensors, wireless data transmission, and rechargeable solar battery. Mapped vegetation growth of an invasive plant species in Benin to predict future growth.

Methods and Tools: **Arduino**, **C++**, **Geographic Information System Mapping (ArcGIS)**, **Python**

Feb 2019 – Aug 2019

Grants, Awards, Fellowships

Horton-Hallowell Fellowship

Awarded graduate studies fellowship from Wellesley College Graduate Fellowships.

2024 – 2025

“Co-Design of a Mobile App to Support Person-Centered Contraceptive Decision Support among Adolescent Girls and Young Women in Kenya in the Pharmacy Setting.”

Received grant from UW's Global Innovation Fund.

Jan 2024 – Feb 2025

Quad Fellowship

Selected into the inaugural cohort as a representative from Japan. Awarded fellowship to support graduate studies.

2022 – 2023

MIT Technology Review's Innovators Under 35 Japan

Awarded for research examining technologies used for healthcare delivery in LMICs.

2022

Funai Overseas Scholarship

Awarded Japanese Ph.D. fellowship that covers tuition, insurance, and living expenses for 2 years.

2020 – 2023

Grace Hopper Celebration 2020 Scholarship Awarded to attend conference for women in tech.	2020
Japan Student Services Organization (JASSO) Scholarship Awarded Japanese scholarship to pursue undergraduate studies in the U.S. for 4 years.	2017 – 2021
Grew Bancroft Foundation Scholarship Awarded Japanese scholarship to study at an American liberal arts college for 4 years.	2017 – 2021
Kanazawa Iwao Memorial Foundation Scholarship Awarded Japanese scholarship to pursue undergraduate studies in the U.S. for 1 year.	2017

Teaching

Graduate Teaching Assistant, University of Washington
Courses: Human-Computer Interaction (Win 2024), Capstone Software Design to Empower Underserved Populations (Spr 2024)

Undergraduate Teaching Assistant, Wellesley College
Courses: Human-Automation Interaction (Spr 2021), Human-Computer Interaction (Spr 2021), Calculus II (Spr 2018)

Mentorship

Khushi Khandelwal: Senior thesis, Mobile App for Expanding Contraceptive Choice in Kenya

Ariel Fu: Mobile App for Expanding Contraceptive Choice in Kenya

Sandy Cheng: Mobile App for Expanding Contraceptive Choice in Kenya

Shrimayee Narasimhan: Mobile App for Expanding Contraceptive Choice in Kenya

Shobhit Srivastava: Mobile App for Expanding Contraceptive Choice in Kenya

Academic Service

Reviewing

Proceedings of the ACM on Human-Computer Interaction (PACM HCI), CSCW	2023 – Present
ACM CHI Conference on Human Factors in Computing Systems (CHI)	2023 – Present

Organization

UW Change Seminar Co-Organizer	2022 – Present
UW ICTD Seminar Co-Organizer	2022 – Present
UW CSE Prospective Student Committee Co-Chair	2023 – 2024
UW Pre-Application Mentorship Service Volunteer	2021 – 2024

Conference Volunteering

ICTD 2022 Student Volunteer Chair	2022
ACM COMPASS 2022 Student Volunteer	2022
Automotive UI 2021 Student Volunteer	2021

Volunteering

Parasaiyo Japan, The Philippines May 2015 – Present
Supporting orphanage in the Philippines in their pursuits for higher education.
Organizes charity events in Japan to raise donation funds. Makes annual visits to orphanage.

Chinatown Afterschool Program Mentor Boston, MA, USA Sept 2017 – May 2018
Assisted with providing afterschool instruction for children living in Boston's Chinatown. Supported learning for third grade students.