# Lisa Orii

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

Paul G. Allen School of Computer Science & Engineering
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## RESEARCH INTEREST

My research examines and evaluates mobile health (mHealth) deployments in low- and middle-income countries (LMICs). I utilize human-centered design and qualitative approaches with the goal of successful and locally manageable mHealth interventions that can integrate into existing health systems. I closely collaborate with global health researchers, researchers from LMICs, and Ministries of Health to prioritize the needs of local people and addressing local challenges. I am interested in examining all phases of maturity of mHealth interventions, from ideation and pre-prototyping to integration.

## EDUCATION

*Sept 2021 – Present*    **University of Washington**
Ph.D. in Computer Science & Engineering
Advisor: Professor Richard Anderson

*Sept 2017 – June 2021*    **Wellesley College**
B.A. in Computer Science and Philosophy
Advisor: Professor Orit Shaer
*Magna Cum Laude, Phi Beta Kappa, Sigma Xi*

*Sept 2019 – Dec 2019*    **University of Oxford Worcester College**
Visiting student in Computer Science and Philosophy

## PUBLICATIONS

### PEER-REVIEWED PUBLICATIONS

1. **Lisa Orii**, 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.* [Just Accepted]

2. **Lisa Orii**, 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

3. **Lisa Orii**, 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

4. **Lisa Orii**, 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

5. **Lisa Orii**, 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.

6. Di Jin, Zhijing Jin, Joey Tianyi Zhou, **Lisa Orii**, 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 Orii**, TojumiOluwa Adegboyega, Anisha Nakagawa and Julliet Wanyiri. (2019, December). Co-Designing an Environmental Observatory to Support Eco-Entrepreneurship in Benin. *In AGU Fall Meeting Abstracts* (Vol. 2019, pp. GC53B-01).

## UNDER REVIEW

1. **Lisa Orii**, Kate S. Wilson, Jacqueline Huwa, Christine Kiruthu-Kamamia, Odala Sande, Agness Thawani, Astrid Berner-Rodoreda, Evelyn Viola, Hannock Tweya, Petros Tembo, Wapu Masambuka, Richard Anderson, & Caryl Feldacker. "They provide the right kind of support." A qualitative study of preferences for differentiated service delivery location among recipients of antiretroviral therapy at Lighthouse Trust in Lilongwe Malawi. Under review at *PLOS ONE.*

2. **Lisa Orii**, Caryl Feldacker, Jacqueline Huwa, Agness Thawani, Evelyn Viola, Christine Kiruthu-Kamamia, Odala Sande, Hannock Tweya, and Richard Anderson. HIV Client Perspectives on Digital Health in Malawi. Under review at the *ACM CHI conference on Human Factors in Computing Systems (CHI '24).*

3. Shaan Chopra, **Lisa Orii**, Katherine Juarez, Nussara Tieanklin, James Fogarty, and Sean A. Munson. Menopause Legacies: Designing to Record and Share Lived Experiences of Menopause Across Generations. Under review at the *27th ACM SIGCHI Conference on Computer-Supported Cooperative Work & Social Computing (CSCW '24).*

## RESEARCH PROJECTS

*Oct 2023 – Present* **Mobile App for Expanding Contraceptive Choice in Kenya**

*Advisors: Professor Richard Anderson (UW CSE) & Professor Elizabeth Harrington (UW Dept. of Global Health)*
Designing and providing guidelines for a mobile app for Kenyan adolescent girls and young women for providing contraceptive education and decision support.
**Methods and Tools: Human-Centered Design**, Literature Review

*Sept 2023 – Present* **USSD Transaction Failures in Nigeria**

*Advisor: Professor Richard Anderson (UW CSE)*
In collaboration with the DFS Lab, we are designing a longitudinal repeated measures study to examine USSD reliability in Nigeria.
**Methods and Tools: Study Design** (ideation, recruitment planning, ethics approval)**, Quantitative Methods**

*June 2023 – Present* **Mobile Apps for Aiding Provider Decision-Making in Clinical Settings**

*Advisor: Professor Richard Anderson (UW CSE)*
Examining the potential and value of mobile apps that guide healthcare providers to follow healthcare protocols during patient clinical visits. Developing guidelines for successful and locally manageable mHealth interventions for local health leadership.
**Methods and Tools: Literature Review**

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| *May 2022 – Present* | **Electronic HIV Data Security and Privacy in Malawi**<br>*Advisors: Professor Richard Anderson (UW CSE) & Professor Caryl Feldacker (UW Dept. of Global Health)*<br>Worked with mHealth researchers and researchers from Malawi to investigate gaps and opportunities in the security of an open-source mobile medical record system used at a HIV care program in Malawi. Developed interview guides with local researchers and conducted interviews and focus group discussions with healthcare professionals, Ministry of Health officials, and HIV clients to illuminate key data security issues. Through discussion with local researchers, we developed policy and practice improvements for data security and privacy.<br>**Methods and Tools: Study Design** (ideation, ethics approval, implementation, publication writing and submission), **Fieldwork, Key Informant Interviews, Focus Group Discussions**, **Thematic Analysis**, **ATLAS.ti** |
| *Jan 2022 – Present* | **Designs for Recording and Sharing Menopause Experiences Across Generations**<br>Proposed designs and guidelines for recording and sharing menopause experiences across generations and within families.<br>**Methods and Tools: Study Design** (ideation, ethics approval, implementation, publication writing and submission), **Semi-Structured Interviews**, **Co-Design Sessions**, **Thematic Analysis** |
| *Jan 2022 – Apr 2022* | **COVID-19 Data Accuracy in Uganda and Ghana**<br>*AdvisoR: Professor Richard Anderson (UW CSE)*<br>Investigated reasons for COVID-19 data underreporting in Uganda and Ghana.<br>**Methods and Tools: Study Design** (ideation, ethics approval, implementation), **Fieldwork**, **Semi-Structured Interviews**, **Thematic Analysis** |
| *Sept 2021 – Dec 2021* | **Sidewalks and Socio-Demographics**<br>*Advisor: Professor Jon Froehlich (UW CSE)*<br>Mapped sidewalk presence and quality to geographic regions. Examined correlations between sidewalk characteristics and socio-demographics.<br>**Methods and Tools: Python** |
| *Apr 2020 – May 2022* | **Speech Practice Systems to Improve Self-Perceptions**<br>*Advisor: Professor Takuji Narumi (University of Tokyo)*<br>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.<br>**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** |
| *Sept 2020 – July 2021* | **Truck Drivers' Perspectives on Automation**<br>*Advisor: Professor Orit Shaer (Wellesley College)*<br>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.<br>**Methods and Tools: Study Design** (ideation, implementation, publication writing and submission), **Thematic Analysis**, **Python** |
| *Jan 2020 – Dec 2020* | **Developing an Urban Well-Being Index**<br>*Advisor: Dr. Luis Alonso (MIT Media Lab)*<br>Led the formulation of an urban metric that predicted well-being in urban environments.<br>**Methods and Tools: Study Design** (ideation, implementation, publication writing and submission), **Literature Review** |
| *Sept 2019 – May 2020* | **Generating Attractive News Headlines**<br>*Advisor: Dr. Di Jin (MIT CSAIL)* |

Contributed to building a model that generated attractive news headlines with various writing styles. Analyzed model performance.
**Methods and Tools: Literature Review**

*Feb 2019 – Aug 2019* **Designing a Low-Cost Kit for Ecosystem Monitoring**
*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**

# AWARDS

*2022* **Quad Fellowship**
Selected into the inaugural cohort as a representative from Japan.

*2022* **MIT Technology Review's Innovators Under 35 Japan**

*2020* **Funai Overseas Scholarship**
Awarded Ph.D. fellowship that covers tuition, stipend, and living expenses for two years.

*2020* **Grace Hopper Celebration 2020 Scholarship**

*2017* **Japan Student Services Organization (JASSO) Scholarship**
Awarded scholarship to pursue undergraduate studies in the U.S. for four years.

*2017* **Grew Bancroft Foundation Scholarship**
Awarded scholarship to study at an American liberal arts college for four years.

*2017* **Kanazawa Iwao Memorial Foundation Scholarship**
Awarded scholarship to pursue undergraduate studies in the U.S. for one year.

# TEACHING & TUTORING

*Spring 2021* **CS349H Human-Automation Interaction** *Computer Science, Wellesley College*
*Spring 2021* **CS220 Human-Computer Interaction** *Computer Science, Wellesley College*
*Winter 2020* **Research Mentorship Program** *Kumon Kokusai Gakuen*
*Spring 2018* **Calculus II** *Mathematics, Wellesley College*

# ACADEMIC SERVICE

*2023 – Present* **Reviewing for Proceedings of the ACM on Human-Computer Interaction, CSCW (PACM HCI)**

*2023 – Present* **Reviewing for ACM CHI Conference on Human Factors in Computing Systems (CHI)**

*Jan 2023 – Present* **UW CSE Prospective Student Committee Co-Chair** *Seattle, WA, USA*

*2021 – Present* **UW Pre-Application Mentorship Service Volunteer** *Seattle, WA, USA*

*2022 – Present* **UW Change Seminar Co-Organizer** *Seattle, WA, USA*

*2022 – Present* **UW ICTD Seminar Co-Organizer** *Seattle, WA, USA*

*Apr 2022 – June 2022* **ICTD 2022 Student Volunteer Chair** *Seattle, WA, USA*

*June 2022*  **ACM COMPASS 2022 Student Volunteer** *Seattle, WA, USA*

*Sept 2021*  **Automotive UI 2021 Student Volunteer** *Remote*

## VOLUNTEERING

*May 2015 – Present*  **Parasaiyo** *Japan, The Philippines*
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.

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