LIAM KETTLE, M.S.

Human Factors Researcher

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EDUCATION

2024 — **PhD., Human Factors & Applied Cognition Psychology**
George Mason University — Fairfax, VA

2022 — **M.A., Human Factors & Applied Cognition Psychology**
George Mason University — Fairfax, VA

2020 — **M.S., Psychology**
University of Otago — Otago, New Zealand

2018 — **B.S.(Hons), Psychology**
University of Otago — Otago, New Zealand

RESEARCH EXPERIENCE

Current | 2020 — **Doctoral Research Scholar**
George Mason University — Fairfax, VA

- Enhanced driver safety awareness by advocating key recommendations for effective vehicle-human communication to industry, government, and academic stakeholders through a systematic review and thematic analysis of 8500+ responses.
- Increased potential for product growth by presenting actionable recommendations to external stakeholders through task, competitor, and heuristic analysis, user interviews, and iterative prototyping to explore users' behaviors and motivations.
- Published strategic recommendations to improve accessibility, communication style, and user experiences of mental health AI chatbots via parallel studies analyzing 19 interviews with cognitive walkthroughs and over 1,500 comments from online public forums.
- Enabled research growth through the management and mentoring of 20+ researchers over 7 projects through all phases of research, from study design (literature reviews and planning), data collection (in-person and online recruitment), analysis (thematic analysis, ANOVA, regression), and report writing.
- Published 5+ articles incorporating quantitative (ANOVA, regression, psychometrics) and qualitative (thematic analysis) analyses from structured and unstructured surveys, performance metrics, and usability tests.

2023 — **Research Associate**
George Mason University — Fairfax, VA

- Enhanced research protocol effectiveness by advocating areas for improvement to stakeholders towards creating a novel testbed for human-machine teaming in space operations.
- Strengthened support for securing future grants towards human-machine teaming through successful implementation of proof-of-concept experimental research.
- Collaborated with the United States Air Force Academy and mentored 2 cadets in end-to-end research leading to their successful stakeholder presentation and conference submission.

2020 | 2018 — **Researcher**
University of Otago — Otago, New Zealand

- Enhanced road safety understanding of youth driver risk factors through the development of driving simulations coupled with SPSS regression analysis on survey data.
- Advocated policy changes and safety initiatives at rail level crossings through systematically identifying 40+ crash contributing factors at rail level crossings across New Zealand and Australia via thematic analysis of investigation reports and Subject Matter Expert survey.

UX METHODS

User interviews
User testing
Usability testing
Survey design, development, & analysis
Cognitive walkthrough
Competitor analysis
Data visualization
Empathy Map
Experimental design
Heuristic evaluation
Hypothesis testing
Participant recruitment
Prototype feedback & testing
Personas
Stakeholder interviews
Task analysis

STATISTICAL ANALYSES

ANOVA
Correlation
Exploratory data analysis
Multivariate
Psychometrics
Qualitative analysis
Regression

CODING / TOOLS

Figma
Qualtrics
R
SPSS
SQL

*Made with the R packages **pagedown** and **datadrivencv**.*

The source code is available on github.com/LiamKettle/resume.

SELECT PUBLICATIONS

Kettle, L., Herrera, K.M.G., Pithayarungsarit, P., Simpson, K.L., Sharifi, K., & Lee, Y-C. (Under Review). Exploring a Framework of Contextual Vehicle-Human Communication Features Across Driving Contexts to Enhance Situation Awareness and Trust. *Transportation Research Part C*.

Kettle, L., & Lee, Y-C. (2023). User Experiences of Well-being Chatbots. *Human Factors*. https://doi.org/10.1177/00187208231162453

Kettle, L., McCarty, M.M., Simpson, K.L., & Lee, Y-C. (2023). Impact of Monitoring Requests on Publics' Assignment of Blame and Praise towards Level 3-equipped Vehicles. *Human Behavior and Emerging Technologies*. https://doi.org/10.1155/2023/9009791

Kettle, L., & Lee, Y-C. (2022). Augmented Reality for Vehicle-Driver Communication: A Systematic Review. *Safety*. https://doi.org/10.3390/safety8040084

SELECT AWARDS

- HFES Emerging Leader Program (2023)
- HFES Student Member with Honors (2023)
- George Mason University Presidential Scholarship (2020, 2021, 2022, 2023)
- University of Otago Master's Research Scholarship (2019)

PROFESSIONAL SERVICE & LEADERSHIP

Current | 2022

Leadership Development Committee Member
Human Factors and Ergonomics Society

- Enhanced long-term professional and student leadership development across the HFES organization by increasing available workshops and expanding resources through reviewing existing literature and conducting interviews to identify user needs.
- Established a dedicated community for 175+ students and early career professionals that foster collaboration, learning, and communication.

2023 | 2022

UX Club Manager
George Mason University

- Founded a UX community for graduate students to learn UX research and methodologies leading to members winning their first usability competition.

2023

HFES Host Committee Member
Human Factors and Ergonomics Society

- Enhanced accessibility and awareness of the HFES conference through organizing collaborative activities and events for academic, industry, and government attendees.

2023

Conference Peer Reviewer
Human Factors and Ergonomics Society

- Peer-reviewed 3 conference proceedings submissions using expert knowledge of the surface transportation domain.
- Provided constructive feedback to enhance readability, reproducibility, and impactfulness of research papers.

2022 | 2021

Student Chapter President
Human Factors and Ergonomics Society

- Elected leader for student chapter with 9 members and responsible for continuing active engagement with local and national organizations.
- Successfully organized 17 events including partnering with 10 guest speakers to enhance information dissemination, recruitment, and mentorship.