LIAM KETTLE, M.S.

Human Factors and User Experience 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 — **Graduate Research Assistant**
George Mason University — Fairfax, VA

- Identified 29 key insights and recommendations for effective communication between autonomous vehicles and drivers through a systematic review of 31 articles and analyzing 8500+ comments across 128 participants.
- Identified actionable recommendations to increase potential for product growth of meal delivery services through task, competitor, and heuristic analysis, 5+ user interviews, and iterative prototyping to explore users' behaviors and motivations
- Performed qualitative analysis of 19 user interviews and over 1,500 comments from online public forums identifying 21 emerging themes across the parallel studies to improve accessibility, communication style, and user experiences of mental health AI chatbots.
- Managed 20+ researchers over 7 projects through all phases of research, from study design (literature reviews and planing), data collection (in-person and online recrtuiment), and analysis (qualitative thematic analysis, ANOVA, moderation analysis).
- Demonstrated technical statistics expertise using SPSS and R statistical software to analyze quantitative (ANOVA, multiple regression, psychometrics, Bayesian) and qualitative (thematic analysis) data including structured and unstructured surveys, performance metrics, and usability tests.

2023 — **Summer Research Assistant**
George Mason University — Fairfax, VA

- Identified 5+ areas for improvement towards creating a testbed for human-machine teaming in space operations through conducting an experimental study with 20 participants.
- Analyzed quantitative measures using R to provide a proof-of-concept in support of future grants towards human-machine teaming.
- Collaborated with the United States Air Force Academy and mentored 2 cadets in end-to-end research.

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

- Developed STI-SIM driving simulations and regressed behavioral changes on quantitative survey data of 100+ participants using SPSS to identify distinct youth driver risk factors across visibility conditions.
- Systematically identified 40+ crash contributing factors at rail level crossings across New Zealand and Australia through thematic analysis of investigation reports and Subject Matter Expert survey.

UX METHODS

- Experimental design
- Survey development & design
- User testing
- User interviews
- Usability evaluations
- Hypothesis testing
- Competitor analysis
- Participant recruitment
- Data visualization

STATISTICAL ANALYSES

- ANOVA
- Regression
- Exploratory data analysis
- Correlation
- Psychometrics
- Qualitative analysis

CODING / TOOLS

- R
- SPSS
- SQL
- Qualtrics

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

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

Last updated on 2023-10-06.

SELECTED PUBLICATIONS & PROCEEDINGS

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 N/A

Kettle, L., & Lee, Y-C. (2023). User Experiences of Well-being Chatbots. *Human Factors*

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

SELECTED AWARDS

- George Mason University Presidential Scholarship (2024)
- HFES Emerging Leader Program (2023)
- HFES Student Member with Honors (2023)

PROFESSIONAL SERVICE & LEADERSHIP

Current | 2022

Leadership Development Committee Member

Human Factors and Ergonomics Society

- Tasked with the further development of leadership resources and pathways into the organization
- Reviewed existing literature; conducted interviews to identify user needs

2023

HFES Host Committee Member

Human Factors and Ergonomics Society

- Organized events and activities for academic, industry, and government attendees for the HFES annual meeting

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
- Organized 17 events including 10 guest speakers for information dissemination, recruitment, and mentorship