

# LIAM KETTLE, M.S.

PhD Candidate - Human Factors and User Experience Researcher



## 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
  - 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 user interviews 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 **Summer Research Assistant**  
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.

✉ [lkettle@gmu.edu](mailto:lkettle@gmu.edu)  
☎ 571-253-5249  
🌐 [liamkettle.com](http://liamkettle.com)  
in [linkedin.com/in/liam-kettle](https://www.linkedin.com/in/liam-kettle)  
📄 [Google Scholar](#)  
🐙 [github.com/LiamKettle](https://github.com/LiamKettle)

## UX METHODS

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

## STATISTICAL ANALYSES

ANOVA  
Correlation  
Exploratory data analysis  
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](https://github.com/LiamKettle/resume).

Last updated on 2023-11-19.

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.



## TEACHING EXPERIENCE

2020  
|  
2019

### Psychology Laboratory Demonstrator

University of Otago

📍 Otago, New Zealand

- Taught over 70 undergraduate students across 3 class laboratories, graded 100% of student assignments, and provided constructive feedback for students.

2019  
|  
2018

### Cognitive Engineering Teaching Assistant

University of Otago

📍 Otago, New Zealand

- Evaluated over 50 novel system designs across various applications of Human Factors and provided recommendations for future accident analyses.



## JOURNAL 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 Public's 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>



## CONFERENCE PROCEEDINGS

**Kettle, L.,** Herrera, K.M.G., Pithayarungsarit, P., Simpson, K.L., & Lee, Y-C. (2023). A Framework of Vehicle-Human Communication Features at Traffic Intersections to Enhance Trust and Situation Awareness. In *Proceedings of the 67th Human Factors and Ergonomics Society International Annual Meeting*. <https://doi.org/10.1177/21695067231192927>

**Kettle, L.,** & Lee, Y-C. (2023). Gender Differences in Responsibility Assignment towards Level 3-ADS Vehicles. In *Proceedings of the 67th Human Factors and Ergonomics Society International Annual Meeting*. <https://doi.org/10.1177/21695067231192889>

**Kettle, L.,** Melles, L., & Simpson, K. (2022). Moderation Analysis of Gender in Social Robot Interactions. In *Proceedings of the 66th Human Factors and Ergonomics Society International Annual Meeting*. <https://doi.org/10.1177/1071181322661366>

**Kettle, L.,** & Lee, Y-C. (2022). Impact of Monitoring Requests on Trust, Acceptance, Blame, and Praise of Autonomous Vehicles. In *Proceedings of the 66th Human Factors and Ergonomics Society International Annual Meeting*. <https://doi.org/10.1177/1071181322661495>

**Kettle, L., & Lee, Y-C.** (2021). "Welcome to your Daily Wellness Check": The Proposed Evaluation of a SMS-based Conversational Agent for Managing Health and Well-being. *In Proceedings of the 65th Human Factors and Ergonomics Society International Annual Meeting*.<https://doi.org/10.1177/1071181321651297>

Andersson, L., Ayala, A., Chan, S., Hickerson, K., **Kettle, L.**, Malcein, L., & Lee, Y-C. (2021). User Experience and Analysis of an Autonomous Shuttle Service. *In Proceedings of the 7th International Conference on Vehicle Technology and Intelligent Transport Systems*.<http://doi.org/10.5220/0010408703700377>



## AWARDS

- HFES Emerging Leader Program (2023)
- HFES Student Member with Honors (2023)
- Human Factors and Ergonomics Society Student Travel Award (2021)
- 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.

2022  
|  
2021

### Workshop Lead

George Mason University

- Led multiple “**Introduction to R Programming**” workshops for graduate students introducing R programming, data cleaning, reproducible coding, data visualization, and statistical analysis.
- Designed a skills workshop for “**Usability Prototyping Methods**” for graduate students to enhance their usability and product design skills using an industry-standard design tool.

2021  
|  
2020

### Student Chapter First-year Liaison

Human Factors and Ergonomics Society

- Facilitated new student integration into the graduate program.



## PROFESSIONAL MEMBERSHIPS

Current  
|  
2021

### Student Member

Human Factors and Ergonomics Society

Human AI Robot Teaming Technical Group

Surface Transportation Technical Group