

# LIAM KETTLE, M.S.

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  
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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 recruitment), 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  
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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.

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in [linkedin.com/in/liam-kettle](https://linkedin.com/in/liam-kettle)  
🐙 [github.com/LiamKettle](https://github.com/LiamKettle)

## 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](https://github.com/LiamKettle/resume).

Last updated on 2023-10-09.



## TEACHING EXPERIENCE

2020  
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2018

### Psychology Teaching Assistant

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



## 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.,** McCarty, M.M., Simpson, K.L., & Lee, Y-C. (Under Review). Impact of Monitoring Requests on Publics' Assignment of Blame and Praise towards Level 3-equipped Vehicles. NA

**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

- 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  
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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  
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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