KASSANDRA R. LEE, Ph.D.

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COGNITIVE SCIENTIST | HUMAN PERCEPTION & BEHAVIOR | VISION SCIENTIST | APPLIED DATA SCIENCE

Cognitive and vision scientist with expertise in behavioral modeling, experimental design, and applied data science. Experienced in designing perceptual studies, analyzing complex human data, and communicating actionable insights for product development, UX, and decision-making. Skilled in modeling individual variability and evaluating visual systems in real-world and research contexts.

CORE SKILLS

Data Science, Consumer Behavior Modeling, Predictive Analytics, Experimental Design, Human Factors, UX Metrics, Experimental Psychology, Color Vision, Colorimetry
Tools & Languages: Python, R, MATLAB, Jupyter, Qualtrics
Additional: GitHub, fMRI, EEG, Eye Tracking, A/B Testing

RELEVANT EXPERIENCE

COLOR VISION SCIENTIST (PART-TIME) – Operational Based Vision Assessment Lab | KBR / USAF
May 2025–Present
- Developing visual performance tasks for mobile vision assessments used in military contexts
- Applying color vision science to support perceptual test design and measurement for stimulus optimization
- Collaborating with engineers and domain experts to calibrate displays and evaluate measurement validity of prototype tasks
- Supporting validation planning to ensure usability and relevance of perceptual metrics for end-users

VISION SCIENCE RESEARCHER – Comp. Memory & Perception Labs | University of Colorado Boulder
Jul 2024–Jul 2025
- Conduct mixed-methods experiments on visual attention, eye dominance, and memory using survey, behavioral, and fMRI data
- Presented actionable findings and refined research protocols to improve data quality

VISION SCIENTIST INTERN | Snap Inc., Boulder, CO
Jun 2023–Sep 2023

- Led user studies on vergence-accommodation mismatch in AR using quantitative surveys and perceptual tasks in AR and VR environments
- Designed, pitched, programmed, ran, and analyzed VR eye-tracking study to build ML models aimed at improving user comfort
- Applied classification techniques to model individual variability in perceptual response to visual stimuli

GRADUATE RESEARCHER – Visual Perception Lab | University of Nevada, Reno
Jul 2018–May 2024
- Designed psychophysical, imaging, and survey-based research on color vision, face perception, and user variability
- Published 10+ peer-reviewed papers; presented at 15+ academic conferences and industry-facing meetings
- Led collaborative projects across labs and institutions to investigate user-level differences in perceptual processing

SELECTED PUBLICATIONS

Crognale, M. A., **Lee, K.R**., Richardson, A., & Webster, M.A. (2023). The physiology and management of individual differences in color vision. *Color and Colorimetry*.
Lee, K.R., Groesbeck, E., Gwinn, O.S., Webster, M.A., & Jiang, F. (2021). Enhanced peripheral face processing in deaf individuals. *Journal of Perceptual Imaging*.
Qiu, C.*, **Lee, K. R**.*, Goldstein, R., Jung, J. H., & Peli, E. (2018). De-cluttering using motion parallax in simulated prosthetic vision. *TVST*.

Full CV and publication list available at github.com/kassandrarlee/cv

EDUCATION

Ph.D., Integrative Neuroscience – University of Nevada, Reno (2018–2024)
M.S., Cognitive & Behavioral Sciences – Illinois State University (2014–2016)
B.A., Psychology with Honors, Biology Minor – Lycoming College (2010–2014)

ADDITIONAL HIGHLIGHTS

Technical Proficiency: MATLAB, Python, R, Psychtoolbox, EyeLink, Oculus Rift, Siemens 3T, Qualtrics, BrainPort sensory substitution medical device
Leadership: Invited speaker at Smith-Kettlewell, RIT, and CU Boulder | Guest Editor, JPI