

Matthew R. Kleinman, PhD

Educator | Neuroscientist

El Cerrito, CA | (602) 373-2966 | mattrkleinman.com | mattrkleinman@gmail.com | [LinkedIn](#)

Experienced educator and scientist with expertise in biology, psychology, statistics, and real-world data, passionate about cultivating curiosity and excitement in learning about science and the natural world

EDUCATION

Ph.D. in Neurobiology, Yale University 8/2009 – 9/2015

B.S. in Psychology, University of Arizona 8/2005 – 5/2009
Summa cum laude, with Honors

WORK EXPERIENCE

Resident Teacher, Richmond High School 8/2026 – present

- Observed and taught 3 days per week in the 10th grade biology classroom of an experienced mentor teacher, learning instructional techniques and putting them into practice
- Member of the 2026-2027 West Contra Costa Unified School District Teacher Residency program

Data Science Consultant, Denver Life Sciences 4/2026 – 9/2026

- Developed a flexible multicompartment model for quantitative predictions of state-dependent fluid movement throughout major internal body fluid reservoirs
- Contributed to the creation and refinement of an experimental protocol for assessing physiological changes throughout an extended multi-hour dehydration and rehydration process

Substitute Teacher, West Contra Costa Unified School District 1/2026 – present

- Supervised middle and high school classrooms, guiding students through diverse lessons

Assistant Project Scientist, University of California, Berkeley 10/2021 – 6/2025

- Led neuroscience research program leveraging machine learning approaches to study how memory replay in rodents is controlled by value learning and reward prediction errors ([publication link](#))
- Onboarded and mentored new members of the team, directly training new students and postdocs in experimental methods, safety and record keeping procedures, and statistical analyses
- Wrote custom Python and MATLAB code to analyze high-dimensional neural time series datasets
- Managed laboratory chemical inventory, SOPs, and served as Lab Safety Coordinator
- Presented work at the Society for Neuroscience Annual Meeting 2023 international conference

Postdoctoral Researcher, UC Berkeley / Johns Hopkins University 10/2015 – 9/2021

- Collected and catalogued over a decade of previously-collected data in the lab, documenting and standardizing the datasets in an easily-accessible database
- Communicated preliminary research results in departmental seminars and the Society for Neuroscience Annual Meeting 2019 conference
- Brought new techniques into the lab, including chemogenetic silencing and fiber photometry imaging
- Created a processing pipeline with custom code for extracting, cleaning, aligning, and combining analysis of diverse timescale data streams

TEACHING EXPERIENCE

-
- **Resident Teacher**, Richmond High School: Observed and taught in the 10th grade biology classroom of a mentor teacher 3 days per week, learning and practicing teaching techniques (2026-2027)

- **Substitute Teacher**, West Contra Costa Unified School District: Mentored students of all ages at various school sites, facilitating productive lessons and study during head teachers' absences (2026)
- **Graduate Teaching Assistant**, Yale University: Led weekly discussion sections of 30+ undergraduate students in introductory behavioral neuroscience course "Brain and Thought" (2011) | Moderated literature discussion and graded essays in graduate level "Principles of Neuroscience" course (2010)
- **Brain Awareness Day Organizer and Volunteer**, Yale University: Demonstrated and supervised middle and high school students through "backyard" science experiments investigating neurophysiology in insects, walked students through university research lab areas and described typical experiments, and chatted informally with groups over lunch about science and careers (2010, 2011)

SELECTED COURSEWORK

- **Biology and Neuroscience:** *Principles of Neuroscience, Neurobiology, Structure and Function of the Human Nervous System, Bioethics in Neuroscience, Neurophysiology of Decision Making, Cognitive Psychology, Neurobiology of Cortical Systems, Intro to Computational Neuroscience, Visuomotor Neurophysiology*, Intro Biology I (Micro and Cellular), Intro Biology II (Ecology and Evolutionary), Child Neuropsychology, Human Memory, Sensation and Perception, Social Psychology, Abnormal Psychology, Industrial/Organizational Psychology, Intro to Biopsychology, Intro to Cognitive Science
- **Statistics and Data Analysis:** *Statistical Methods for Psychology Research, Statistical Models for Psychology Research, Intro to Neural Data Analysis*, Psychology Measurement and Statistics, Games and Decisions: Game Theory
- **History and Social Studies:** History of Greece, Medieval Europe, Imperial Spain 1700-1898, History of France: Development of Modern France, Russia: Empire to Federation, Vietnam and the Cold War, US Military History, Popular Culture in Japan

**graduate level*

PROJECTS AND AWARDS

- **Peer-Reviewed Publications:**
 - 1. [Kleinman and Foster, 2025, eLife](#): Revealed how memory replay in novel environments depends on dopamine reward prediction errors for reward-based encoding prioritization
 - 2. [Kleinman, Sohn, and Lee, 2016, J. Neurophysiol](#): Developed a novel behavioral task to probe temporal perception for simultaneous visual targets, parsimoniously modeled eye-tracking choice behavior using point process modeling
 - 3. [Vickery, Kleinman, Chun, and Lee, 2015, J. Neurosci](#): Modeled how human choices in simple economic games depend on contextual information using reinforcement learning
- **Conference Presentations:** 10 abstracts at international neuroscience conferences (2010 – 2023)
- **Awards:** National Research Service Award, NIH (2012 – 2014) | Patricia Goldman-Rakic Pfizer Fellowship, Yale University (2011 – 2012)

TECHNICAL SKILLS

Programming Languages: Python | MATLAB

Tools and Techniques: Biology and Neuroanatomy | Statistics | Hypothesis Testing | Science Communication | Experimental Design | Data Modeling and Visualization | Grant Writing | Public Speaking