

SCOTT GUERIN, PH.D.

SUMMARY

I am a research scientist at Stanford University with 14 years experience in cognitive psychology and neuroimaging. I have strong experience with behavioral studies of human cognition, experimental design, analysis of large spatiotemporal datasets (eye tracking, neuroimaging), statistical methods (inference, regression, machine learning), data visualization, communicating scientific results to a broad audience, and team leadership.

EXPERIENCE

RESEARCH ASSOCIATE, STANFORD UNIVERSITY – 2015-PRESENT

- Lead research scientist and lead statistical analyst on a large-scale 5-year study of human memory and aging (250 subjects; 6 GB of data per subject)
- The study employs extensive behavioral testing, machine learning analysis of human neural activity, ultra-high resolution structural brain imaging, and molecular and genetic biomarkers of Alzheimer's disease
- Supervise behavioral testing and analysis. Develop novel behavioral metrics to meet study objectives (composite scores, models of human bias, qualitative and quantitative analysis of unstructured text)
- Direct development of image processing pipelines and machine learning algorithms to extract subtle and complex memory signals in the brain (high dimensional spatiotemporal data with low signal-to-noise)
- Mentor research staff, oversee recruitment and training, and manage project timeline and logistics

ASSOCIATE RESEARCH SCIENTIST, YALE UNIVERSITY – 2013-2015

- Developed a novel application of machine learning methods to extract information about the time course of human mental processes from spatiotemporal patterns of neural activity.
- Conducted several experiments investigating imagination and memory applying this new technique

LECTURER (ASSISTANT PROFESSOR), UNIVERSITY OF MELBOURNE – 2012-2013

- Delivered a popular series of lectures on human cognition presented to a class with enrollment exceeding 1,000

POSTDOCTORAL RESEARCH FELLOW, HARVARD UNIVERSITY – 2009-2012

- 3-year National Institutes of Health fellowship funded by a competitive National Research Service Award
- Conducted iterative behavioral testing using observational and quantitative techniques to develop a new behavioral task to study interactions between attention and memory
- Developed a novel application of eye tracking to measure the focus of attention during remembering
- Developed an analytic approach to control for the effects of eye movements on neuroimaging data

EDUCATION

Postdoctoral Research Fellow, *Harvard University* – 2009-2012

Ph.D. Psychology and Cognitive Neuroscience, *University of California Santa Barbara* – 2003-2009

B.A. Psychology, summa cum laude, *University of Massachusetts Boston* – 1999-2003

SKILLS

BEHAVIORAL RESEARCH

Behavioral testing, experimental design, metric development and validation, modeling human behavior, eye tracking

STATISTICS

Inference, regression, machine learning, analysis of large datasets

LANGUAGES

Python, MATLAB, familiar with R

Based in San Francisco

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