Nicholas Ketz

http://nickketz.github.io
nick.ketz@gmail.com

EDUCATION

CU BOULDER
PhD Psychology, Neuroscience, and Cognitive Science
August 2016 | Boulder, CO
Cum. GPA: 3.8

UMN TWIN CITIES
BA in Physics
May 2007 | Minneapolis, MN
Minor in Psychology
Cum. GPA: 3.6

MCNALLY SMITH
AAS in Recording Engineering
May 2001 | Minneapolis, MN

LINKS

Github:// **nickketz**
LinkedIn:// **nickketz**
Research Gate:// **Nicholas_Ketz**

EXPERIENCE

Machine Learning
Deep Learning
Reinforcement Learning
Experiment Design
Methods in Cognitive Science
Neuro-Biology of Memory
Math Models of Human Behavior

SKILLS

PROGRAMMING
Frequent Use:
BASH • Matlab • Python
R • LaTeX • git • svn
Infrequent Use:
PHP • Perl • C++
JavaScript • MySQL

LEADERSHIP/MENTORING
CO-PI on multi-university projects
Active journal reviewer in multiple cross-discipline journals

OBJECTIVES

UNDERSTANDING LEARNING AND MEMORY
- Interested in using behavioral and computational methods to understand the systems and algorithms behind learning and memory.
- Looking for applications of cognitive neuroscience research into real world scenarios, therapeutic applications, and artificial intelligence development

RESEARCH EXPERIENCE

HRL LABORATORIES Research Scientist
August 2016 - Present | Malibu, CA
- Machine learning techniques/architectures based on human memory systems
- Closed-loop tDCS/tACS stimulation system for selective memory enhancement

UNIVERSITY COLORADO AT BOULDER PhD Student
September 2010 - 2016 | Boulder, CO
- Neural network simulations of high level cognition with Randy O'Reilly
- Behavioral and EEG study design and analysis with Tim Curran

NEW YORK UNIVERSITY Research Assistant
September 2007 - Aug 2010 | New York, NY
- fMRI research into human memory with Lila Davachi
- Collaborated with graduate students to plan, execute and analyze fMRI studies

SELECT PUBLICATIONS

Neural Networks

N. Ketz, S. Kolouri, and P. Pilly. Using world models for pseudo-rehearsal in continual learning. *arXiv preprint arXiv:1903.02647*, 2019

N. Ketz, S. G. Morkonda, and R. C. O'Reilly. Theta coordinated error-driven learning in the hippocampus. *PLoS Comput Biol*, 9(6), 06 2013

NeuroImaging

N. Ketz, A. P. Jones, N. B. Bryant, V. P. Clark, and P. K. Pilly. Closed-loop slow-wave tacs improves sleep-dependent long-term memory generalization by modulating endogenous oscillations. *Journal of Neuroscience*, 38(33):7314–7326, 2018

N. Ketz, R. C. O'Reilly, and T. Curran. Classification aided analysis of oscillatory signatures in controlled retrieval. *NeuroImage*, 85(2):749–60, 2014

AWARDS

2018	HRL Outstanding Cooperative Research and Development
2016	Dosier Dissertation Award for Basic Research
2011-2014	NSF Graduate Research Fellowship
2012	David C. Rumelhart Travel Award