ANDREW M. BROOKS, PH.D.

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OBJECTIVE SUMMARY

Cognitive neuroscientist aiming to utilize large dataset analysis skills and knowledge of human behavior to develop innovative methods for solving difficult problems.

TECHNICAL QUALIFICATIONS

- Extensive experience in the design, implementation, and testing of automated processes to test cognitive theories of decision-making
- Expert in hypothesis generation, research design, data collection, big data analysis, and data inference
- Strong interdisciplinary communication skills (neuroscience, psychology, economics, & business)
- Experienced in a variety of statistics software packages (AFNI, SPM, MATLAB, R, SPSS, Stata)
- Programming abilities in MATLAB, shell scripting, and Python
- Skilled in cognitive science research techniques including functional magnetic resonance imaging (fMRI), real-time fMRI, neurofeedback, parametric and nonparametric statistics, multi-voxel pattern analysis, classification, cluster analysis, functional connectivity, and neuroeconomic paradigm implementation

EDUCATION AND EXPERIENCE

DOG STAR TECHNOLOGIES
Atlanta, GA

Project Scientist   *2015-present*

- Designed and implemented an automated interface for pre-processing canine fMRI data
- Generated predictive models of canine training outcome based on their brain data from a cognitive task
- Compared results of fMRI models with multidimensional canine sensor data
- Applied general linear modeling, clustering, and classification to large canine fMRI datasets

EMORY UNIVERSITY
Atlanta, GA

Post-doctoral research   *2013-present*
Supervisor: Dr. Gregory Berns

- Created a set of scripts to utilize preprocessed fMRI data in real-time across four networked workstations
- Generated a complex decision-making task that incorporates real-time fMRI with choices over financial gambles to counteract sub-optimal decision making
- Demonstrated that measured brain responses using fMRI during earnings announcements can predict subsequent changes in stock prices
- Awarded Army Research Office Young Investigator Program Grant (3 years, $150,000) and Facility for Education and Research in Neuroscience Pilot Grant (34 hours of scan time)

EMORY UNIVERSITY
Atlanta, GA

Ph.D. Graduate Student   *2008-2013*
Supervisors: Dr. Gregory Berns, Dr. Monica Capra

- Developed custom automated data preprocessing and analysis pipelines to test cognitive theories of decision making
- Analyzed large fMRI datasets and corresponding behavioral data to test theories of decision making
- Worked closely with economics, business, accounting, and neuroscience researchers to conduct multiple fMRI studies on human financial decision making, from hypothesis generation and testing, to publication
- Awarded Scholars Program in Interdisciplinary Neuroscience Research fellowship
- Awarded (but declined for the aforementioned fellowship) a prestigious NIH Training Grant

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MERCER UNIVERSITY   **Macon, GA**
B.S. in Psychology (Chemistry & Biology Minor), Magna Cum Laude   *2005-2008*
Supervisors: Dr. Miranda Pratt, Dr. Lee Hyer, and Dr. Kevin Bucholtz
- Developed methodology to synthesize trilostane derivatives for use in breast cancer research
- Investigated whether spinal cord stimulation improved quality of life for neuropathic pain patients
- Studied the effect of chewing gum on attention using a custom letter-identification task
- Member of Academic Honors Societies and Dean's List from 2005-2008
- Otis Dewey Knight Award for the Best Theoretical Paper in Psychology in 2007

SELECTED PUBLICATIONS

Brooks, A. M., & Berns, G. S. (2013). Aversive stimuli and loss in the mesocorticolimbic dopamine system. *Trends in Cognitive Sciences*. 17(6):281-286. doi:10.1016/j.tics.2013.04.001.

Ekins, W. G., Brooks, A. M., & Berns, G. S. (2013). The neural correlates of contract failure: an experimental study of contractual risk and penalty framing. *Journal of Risk and Uncertainty*. doi:10.1007/s11166-014-9199-7

Barton, J., Berns, G. S., & Brooks, A. M. (2012). The neuroscience behind the stock market's reaction to corporate earnings news. *The Accounting Review*. November 2014, Vol. 89, No. 6, pp. 1945-1977.

Brooks, A. M., Capra, C. M., & Berns, G. S. (2012). Neural insensitivity to upticks in value is associated with the disposition effect. *Neuroimage*. 59:4086-4093. doi:10.1016/j.neuroimage.2011.10.081.

Brooks, A. M., Pammi, V.S.C., Noussair, C., Capra, C. M., Engelmann, J. B., & Berns, G.S. (2010). From bad to worse: Striatal coding of the relative value of painful decisions. *Frontiers in Decision Making*. doi:10.3389/fnins.2010.00176.

Engelmann, J. B., & Brooks, A. M. (2009) Behavioral and neural effects of delays during intertemporal choice are independent of probability. *J. Neuroscience*. 29:6055-6057, 2009.