James Aaron Ellis

Who I Am and What I do

I'm a trained neuroscientist who fell in love with the world of big data and technology, prompting an early exit from my doctoral studies. I live to make stories out of data, to find their hidden meaning, and to deliver this message to any audience.

Work Experience

Quantitative User Experience Research   Summer 2013
Mozilla Corp.

I analyzed user events from two-thousand study participants to create a story about tab and window usage in the Firefox browser. (One of the largest-ever Mozilla studies.) Tracked 1.5 million individual tabs over a three-week period. Presented results in company-wide broadcast (online @ https://air.mozilla.org/intern-presentation-ellis/.

- Interactive data visualizations using D3 (JavaScript)
- Hadoop and Map-Reduce using Python scripts

User Experience Research   Summer 2012
Google, Inc.

I joined the Google [x] User Research team at a pivotal time for Project Glass. The product was slated for shipment to developers in a matter of months and the user interface (UI) needed a fundamental redesign. I conducted benchmark studies of Project Glass, and a separate comparison of multiple UIs that led to a decision on the primary User Interface and general design improvements. Independently: conducted a 40-person, week-long benchmark of two Android OS versions to compare with task performance on Project Glass UIs.

- RITE testing; user interviews; benchmarking
- Survey design and analysis

PhD Candidate   2012 - Present
Neuroscience and Robotics Laboratory

Modeling of neural signals from the brain related to sensori-motor perception. This involves decomposing the electrical signal arising from brainstem neurons and correlating it with mechanical variables imposed by external stimuli.

- General linear models & principal component analysis
- Digital signal & image processing
- Computer Vision

Research Scientist   2010 - 2012
Univ. Illinois at Chicago

I worked on various studies with the collective goal of establishing brain biomarkers for pediatric psychological disorders such as ADHD and bipolar disorder. I performed statistical analysis and signal processing on functional magnetic resonance imaging data.

- Statistical inference testing: t-tests; ANOVAs
- Six peer-reviewed publications

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Education

Master of Science	Expected Dec 2014
Neuroscience	
Northwestern University	
Bachelor of Arts	2007
Biological Foundations of Behavior	
Franklin and Marshall College	

Awards

NIH Intramural Research Training Award	2008 - 10
The National Institutes of Health	
National Achievement Scholar	2003
National Merit Scholarship Corporation	
John Marshall Scholar	2003 - 07
Franklin and Marshall College	

Computer Skills

Expert Knowledge	MATLAB, Python
Intermediate Knowledge	R, Linux

Communication Skills

Presentations	Re-designing American Cities Hackathon
	Lincoln Labs
	The Life and Death of Tabs:
	Quantitative Analysis of Firefox Users
	Mozilla Corp.
Posters	Cognitive Neuroscience Society
	Biological Psychiatry Conference
	Society for Neuroscience

Publications

MN Pavuluri, **JA Ellis**, E Wegbreit, AM Passarotti, MC Stevens. *Behavioural Brain Research*. 2012

E Wegbreit, **JA Ellis**, A Nandam, JM Fitzgerald, AM Passarotti, MN Pavuluri, MC Stevens. *Brain Connectivity*. 2012

E Wegbreit, AM Passarotti, **JA Ellis**, M Wu, N Witowski, JM Fitzgerald, MC Stevens, MN Pavuluri. *Journal of affective disorders*. 2012

A Passarotti, **J Ellis**, E Wegbreit, M Stevens, M Pavuluri. *Brain Connectivity*. 2012

Complete list of publications: Google Scholar page