

Brian T. Quinn, Ph.D.

DATA SCIENTIST · NEUROSCIENTIST

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Creative problem solver specializing in data wrangling, data analysis and data visualization.

Experience

THE DATA INCUBATOR

DATA SCIENTIST FELLOW

New York, NY

Jun 2015-Aug 2015

- Selected from over a thousand applicants to participate in a rigorous 2 month fellowship
- Completed numerous projects involving web scraping, SQL, NLP, machine learning, and MapReduce

NEW YORK UNIVERSITY

PH.D. CANDIDATE

New York, NY

Sep 2006-May 2013

- Analyzed large human electrophysiology datasets consisting of more than 500,000 samples
- Developed machine learning software to automatically detect abnormal brain tissue in MRIs
- Led laboratory sections of 30 students and held regular lectures to class sizes of 80-100 students
- Published and presented results of psychophysical and electrophysiological experiments
- Created web visualization solutions to facilitate long distance brainstorming
- Wrote software to implement Monte Carlo methods, temporal clustering, and statistical tests of time-series data

MARTINOS CENTER FOR BIOMEDICAL IMAGING/HMS/MIT

RESEARCH TECHNICIAN

Charlestown, MA

May 2002-Aug 2005

- Worked with a team of researchers and developers to create and support FreeSurfer software (used by 1,000s of researchers)
- Developed software solutions for projects to quantify and analyze cortical and subcortical structures of the human brain
- Led training and supported over 200 international researchers through phone, email, and site visits
- Authored more than 20 peer-reviewed articles in scientific journals

WEILL MEDICAL COLLEGE OF CORNELL UNIVERSITY

IMAGE DATA ANALYST

New York, NY

Aug 2005-Aug 2006

- Consulted researchers on experimental design using MRI
- Analyzed image datasets for five pediatric studies

Education

New York University

PH.D. IN NEURAL SCIENCE

New York, NY

May 2013

- Focus: Computational Neuroscience, Dynamic Systems Analysis, Machine Learning

Harvard University

NONDEGREE PROGRAM

Cambridge, MA

Jan 2004

- Focus: Biostatistics, Neurophysiology

University of Iowa

B.S.E. IN BIOMEDICAL ENGINEERING

Iowa City, IA

May 2001

- Focus: Computer Science, Electrical engineering, Statistics

Technical Skills & Interests

Programming/Scripting Languages Python, R, Matlab, MapReduce/Hadoop, SQL, Javascript, HTML5, C/C++, bash/tcsh, \LaTeX

Subject Matter Interests Data Analysis, Machine Learning, Recommendation Systems

Modeling & Analysis Predictive, Nonlinear, Neural Networks, Data Mining

Awards & Publications NeuroImage Top Cited Article 2006-2010, Author of 36 Peer-Reviewed Articles

Interests & Miscellaneous Teaching, Tutoring, Basketball, Canoeing NYC Waterways

Volunteering

The Fortune Society

TEACHER AND TUTOR

Queens, NY

Dec. 2014 - Present

- Taught and privately tutored math for formerly incarcerated individuals.

North Brooklyn Community Boathouse

CANOE INSTRUCTOR & STEERING MEMBER

Brooklyn, NY

Jul 2014-Present

- Supervised the expansion of canoe trips by 50% and the addition of educational programming
- Managed the budget, organization, and maintenance of canoe services for over 300 members

Publications

PUBLICATION HIGHLIGHTS

- Intracranial cortical responses during visual-tactile integration in humans** Journal of Neuroscience 2014
Quinn BT, Carlson C, Doyle W, Cash S, Devinsky O, Spence C, Halgren E & Thesen T
- An automated labeling system for subdividing the human cerebral cortex on MRI scans into gyral based regions of interest** Neuroimage 2006
Desikan RS, Ségonne F, Fischl B, Quinn BT, Dickerson BC, Blacker D, Buckner RL, Dale AM, Maguire RP, Hyman BT, Albert MS, Killiany RJ
- Cortical feature analysis and machine learning improves detection of "MRI-negative" focal cortical dysplasia** Epilepsy & Behavior 2015
Ahmed B, Brodley C, Blackmon K, Kuzniecky R, Barash G, Carlson C, Quinn BT, Doyle W, French J, Devinsky O, Thesen T
- Thickness of ventromedial prefrontal cortex in humans is correlated with extinction memory** PNAS 2005
Milad MR, Quinn BT, Pitman RK, Orr SP, Fischl B, Rauch SL

ADDITIONAL PUBLICATIONS

- Cortical thickness abnormalities associated with dyslexia, independent of remediation status** Neuroimage Clinical 2014
- Functional neuroimaging abnormalities in idiopathic generalized epilepsy** Neuroimage Clinical 2014
- Structural brain imaging in children and adolescents following prenatal cocaine exposure: preliminary longitudinal findings** Developmental Neuro 2014
- Septal nuclei enlargement in human temporal lobe epilepsy without mesial temporal sclerosis** Neurology 2013
- Default mode network abnormalities in idiopathic generalized epilepsy** Epilepsy & Behavior 2012
- Individualized localization and cortical surface-based registration of intracranial electrodes** Neuroimage 2011
- Individual differences in verbal abilities associated with regional blurring of the left gray and white matter boundary** Journal of Neuroscience 2011
- Structural evidence for involvement of a left amygdala-orbitofrontal network in subclinical anxiety** Psychiatry Research 2011
- Abnormalities of cortical thickness in postictal psychosis** Epilepsy & Behavior 2011
- Hyperfamiliarity for faces** Neurology 2010
- Prolonged institutional rearing is associated with atypically large amygdala volume and difficulties in emotion regulation** Developmental Science 2010
- Impact of breast milk on intelligence quotient, brain size, and white matter development** Pediatr Res 2010
- Regional white matter volume differences in nondemented aging and Alzheimer's disease** Neuroimage 2009
- The effect of early human diet on caudate volumes and IQ** Pediatric Research 2008
- Detection of cortical thickness correlates of cognitive performance: Reliability across MRI scan sessions, scanners, and field strengths** Neuroimage 2008
- A technique for the deidentification of structural brain MR images** Human Brain Mapping 2007
- Abnormal cortical folding patterns within Broca's area in schizophrenia: evidence from structural MRI** Schizophrenia Research 2007
- Volumetric cerebral characteristics of children exposed to opiates and other substances in utero** Neuroimage 2007
- Feasibility of multi-site clinical structural neuroimaging studies of aging using legacy data** Neuroinformatics 2007
- Regional cortical thickness matters in recall after months more than minutes** Neuroimage 2006
- Selective increase of cortical thickness in high-performing elderly—structural indices of optimal cognitive aging** Neuroimage 2006
- Neuroimaging H.M.: a 10-year follow-up examination** Hippocampus 2006
- Meditation experience is associated with increased cortical thickness** Neuroreport 2005
- Effects of age on volumes of cortex, white matter and subcortical structures** Neurobiology of Aging 2005
- Cortical volume and speed-of-processing are complementary in prediction of performance intelligence** Neuropsychologia 2005
- Size does matter in the long run: hippocampal and cortical volume predict recall across weeks** Neurology 2004
- Sequence-independent segmentation of magnetic resonance images** Neuroimage 2004