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 — *New York, NY*

Data Scientist Fellow — *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 — *New York, NY*

Ph.D. Candidate — *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 prfesented 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 — *Charlestown, MA*

Research Technician — *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 that 20 peer-reviewed articles in scientific journals

WEILL MEDICAL COLLEGE OF CORNELL UNIVERSITY — *New York, NY*

Image Data Analyst — *Aug 2005-Aug 2006*

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

Education

New York University — *New York, NY*

Ph.D. in Neural Science — *May 2013*

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

Harvard University — *Cambridge, MA*

nondegree program — *Jan 2004*

- Focus: Biostatistics, Neurophysiology

University of Iowa — *Iowa City, IA*

B.S.E. in Biomedical Engineering — *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 — *Queens, NY*

Teacher and Tutor — *Dec. 2014 - Present*

- Taught and privately tutored math for formerly incarcerated individuals.

North Brooklyn Community Boathouse — *Brooklyn, NY*

Canoe Instructor & Steering Member — *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