Brian A Muller **Resume / Curriculum Vitae**

CONTACT INFORMATION New York, NY / Washington, DC ✉ bamuller@gmail.com

CITIZENSHIP USA

EDUCATION

M.S. in Bioinformatics Dec 2009

- *Department of Biostatistics, Bioinformatics, and Epidemiology* at the Medical University of South Carolina, Charleston SC USA
- Focused on text-mining, machine learning, and natural language processing
- Gained strong background in statistics and statistical theory, including Bayesian techniques
- Assisted in the creation and administration of a 65 node Linux high-performance computing cluster
- Thesis: *Literature Classification Using a Modified Ising Model*

B.A. in Computer Science May 2005

- College of Charleston, Charleston SC USA
- Performed research using Artificial Neural Nets to analyze music and predict the human perception of pleasantness
- Led a research project to create a basic proof of concept distributed replacement system for email (SMTP).
- Graduated *cum laude*

PROFESSIONAL EXPERIENCE

Chief Scientist and Co-founder 10/2012 - 4/2015

OpBandit, Inc., Washington DC USA

- Acquired by Vox Media
- Participated in first class of The New York Times accelerator timeSpace
- Created opbandit.com, which provides a real-time, SaaS content optimizer for online content publishers
- Designed and implemented big data infrastructure
- Created novel temporal and audience-based optimization algorithm

Lead Data Scientist 10/2010 - 10/2012

LivingSocial, Washington DC USA

- Co-founded Business Intelligence Department, founder/director of Data Science Unit
- Direct efforts to create, execute, and evaluate hypothesis in areas ranging from loyalty program designs to user acquisition source comparisons
- Apply machine learning techniques for text classification, prediction, and analysis
- Responsible for data warehouse and associated reporting / analysis applications

Research Assistant Sept 2009 - March 2010

Johns Hopkins University, *Center for Computational Genomics*, Baltimore MD USA

- Developed software packages to perform novel statistical analyses of gene expression
- Worked with oncology researchers to design experiments and interpret results
- Working to create open source software package for gene set expression comparisons
- Perform analysis of oncology microarray data
- Contribute to the Johns Hopkins Center for Computational Genomics
- Regularly collaborate on projects with faculty from the JHU Biostatistics Department, among others

Research Assistant May 2005 - Sept 2009

Medical University of South Carolina, *Department of Biochemistry*, Charleston SC USA

- Administrator of the 3-D Molecular Imaging Lab
- Assisted researchers with storage (over 5 TB of redundant storage), retrieval, and analysis of X-ray crystallographic data

Software Architect / Instructor June 2005 - May 2007

Medical University of South Carolina, *Office of the Provost*, Charleston SC USA

- Advised the Office of the Provost and the Office of the President on technology matters
- Created web-based (often open source) projects to serve the general needs of the university

Patents

A System for Online Content Optimization (US 61/881,027) 2013

Educational Awards, MUSC

- Travel Fellowship Award for the International Conference on Intelligent Systems for Molecular Biology, 2008
- MUSC Presidential Scholar, 2008 - 2009
- MUSC Presidential Scholars Program Advisory Committee, 2008 - 2009
- MUSC Dean's Scholarship, 2007 - 2008
- Second Place Bioinformatics Prize at MUSC Student Research Day, 2007

Publications

Adam J Richards, Brian Muller, Matthew Shotwell, L Ashley Cowart, Berbel Rohrer, and Xinghua Lu. "Assessing the functional coherence of gene sets with metrics based on the Gene Ontology graph." *Bioinformatics (Oxford, England)* **26**, i79–i87 (2010).

Brian Muller, Adam J Richards, Bo Jin, and Xinghua Lu. "GOGrapher: A Python library for GO graph representation and analysis." *BMC Res Notes* p. 122 (2009).

Brian Muller. *Literature Classification Using a Modified Ising Model.* Master's thesis, Medical University of South Carolina (2009).

Bo Jin, Brian Muller, Chengxiang Zhai, and Xinghua Lu. "Multi-label literature classification based on the Gene Ontology graph." *BMC Bioinformatics* **9**, 525 (2008).

Bing Pan, John C Crotts, and Brian Muller. "Developing Web-Based Tourist Information Tools Using Google Maps." *In* M Sigala, L Mich, and J Murphy (Editors), *Information and Communication Technologies in Tourism 2007* (Springer Vienna, 2007).

Posters Presented

Brian Muller, Adam Richards, Lam Tsoi, Bo Jin, and Xinghua Lu. "GOGrapher: A Python library for GO network graph analysis." *In The Sixteenth International Conference on Intelligent Systems for Molecular Biology* (International Conference on Intelligent Systems for Molecular Biology, Toronto, 2008).

Brian Muller, Adam Richards, Lam Tsoi, and Xinghua Lu. "GOSteiner: A Graph Theoretic Approach for Evaluating Protein Functional Coherence." *In The Perry V. Halushka MUSC Student Research Day* (College of Graduate Studies, Medical University of South Carolina, Charleston, SC, 2007).