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**CONTACT**

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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).
- Minor in Music
- Graduated *cum laude*

PROFESSIONAL **Research Assistant** Sept 2009 - present

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

- Developed software packages to perform novel statistical analyses of gene expression data
- 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** May 2007 - August 2007

Online Game Group, LLC for [chesspark.com](http://chesspark.com)

- Assisted in load balancing and HTTP traffic analysis
- Created Jabber (XMPP) tools, including a bot that performed language analysis
- Created the administrative interface to manage user roles and business logic for thousands of users

**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

**Software Engineer** January 2004 - June 2005  
Monolith Software Solutions, Inc., Charleston SC USA

- Maintained Linux/Apache/MySQL/PHP/Perl environment on company servers
- Developed web-based financial reports for clients
- Project leader for creating company Linux distribution

**Software Engineer** September 2003 - December 2004  
Vision Software Solutions, LLC, Charleston SC USA

- Developed software utility tools for use by clients and in-house
- Assisted in initial stages of migrating one financial software product to a web-based implementation

#### 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).
- 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).