Michael R. Head, Ph.D.

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Skills

- Java programming (10+ years): parsing techniques, Servlets/JSP, SWT and Eclipse plugin development
- Other languages/libraries/tools: C (with GTK2/Glade), C++ (on Linux), Python (with PyGTK), GNU R, GNU autotools, Javascript/JSON

Experience

Software Engineer : *Google*, Mountain View, CA : April 2011 - Present

- Member of software development group responsible for cluster resource management

Senior Software Engineer : *IBM Research*, Hawthorne, NY : Fall 2008 - April 2011

- Member of research group investigating compute cloud infrastructure
- Developed production software and authored research papers and patent applications
- Held co-op, intern, post-doc and software engineer positions during this period

Graduate Research Assistant : *Binghamton University*, Binghamton, NY : Fall 2004 - Fall 2009

- Research group member analyzing and developing the Grid Computing service stack; projects in Java, C, C++, R and Python involving SOAP, XML, and GridFTP
- Reviewed papers for several scientific conferences and journals
- Authored several articles published in peer-reviewed conference proceedings and scientific journals
- Founded and lead the Binghamton University Computer Science Graduate Student Seminar Series

Independent Contractor : *Charles River Analytics*, Cambridge, MA : September 2007 - May 2008

- Developed a complex event processor for intrusion detection systems; responsible for developer tools and servlet/JSP-based AJAX web interface

Linux Specialist : *Custom Systems Integration*, Endicott, NY : January 2006 - March 2006

- Designed and developed an internationalized (gettext-enabled) C-based GTK application for the testing of 12 different digital, analog, GPIB, and CAN PCI I/O boards under Red Hat Enterprise Linux 3
- Authored and documented the installation and test procedure of the operating system, hardware and drivers

Research Assistant : *Brandeis University*, Waltham, MA : Fall 2001 - Summer 2004

- Research group member studying the design of effective groupware solutions; developed a shared editing tool for HTML and JScheme for experiments involving distributed pair programming

Advisory I/T Specialist : *IBM Global Services*, Charlotte, NC : Summer 1999 - Fall 2001

- Traveled to several client sites, developed Java solutions for clients in the banking and finance industry

Education

Fall 2004 - Fall 2009 : **Binghamton University**, Binghamton, NY

- Dissertation title: *Analysis and Optimization for Processing Grid-Scale XML Datasets*
- *Ph.D., Computer Science*; specializing in Grid Computing; 3.966/4.0 GPA

Fall 2001 - Summer 2004 : **Brandeis University**, Waltham, MA

- *M.A., Computer Science*; specializing in Computer Supported Cooperative Work; 3.890/4.0 GPA

Fall 1995 - Summer 1999 : **Binghamton University**, Binghamton, NY

- *B.S., Computer Science* & *B.S., Mathematics* ; 3.461/4.0 overall GPA

Selected Publications

- Michael R. Head, Madhusudhan Govindaraju "Performance Enhancement with Speculative Execution Based Parallelism for Processing Large-scale XML-based Application Data," in *The proceedings of International Symposium on High Performance Distributed Computing*, pp. 21-30, , Munich, Germany, June 2009.
- Michael R. Head, Madhusudhan Govindaraju, Robert van Engelen, Wei Zhang, "Benchmarking XML Processors for Applications in Grid Web Services," in *SC|06 (Supercomputing): International Conference for High Performance Computing, Networking, and Storage*, Tampa, FL, November 2006.
- Michael R. Head, Madhusudhan Govindaraju, Aleksander Slominski, Pu Liu, Nayef Abu-Ghazaleh, Robert van Engelen, Kenneth Chiu, Michael J. Lewis, "A Benchmark Suite for SOAP-based Communication in Grid Web Services," in *SC|05 (Supercomputing): International Conference for High Performance Computing, Networking, and Storage*, Seattle WA, November 2005.

Other interests

Mountain biking, Snowboarding, Homebrewing