

Objective

- To perform research and obtain an advanced degree in computer science.

Education

- **University of Kentucky** Lexington, KY
 - Masters of Science in Computer Science, Dec 2008. GPA: 4.0
- **Calvin College** Grand Rapids, MI
 - B.C.S. May 2007. GPA: 3.3. In-Major: 3.8.

Work Experience

- **Adjunct Instructor** Wyoming, MI
ITT Technical Institute Mar 2009 - Present
 - Teach classes part time at ITT Technical Institute
 - Classes include Linux administration (Desktop and Server), Linux security, intro to programming and client-side web scripting.
 - Responsible for student attendance, grading of assignments and labs and effectively communicating curriculum and learning concepts to student of various abilities, backgrounds and learning styles.
- **Software Engineer** Grand Rapids, MI
DornerWorks Ltd. Jan 2009 - Mar 2010
 - Worked on the Validation and Verification of a large embedded aerospace project
 - * Responsible for verifying that the DO-178B process was adhered to while a problem was fixed
 - * Responsible for providing independent testing of software fixes
 - * Responsible for developing and updating Requirements-Based Tests (RBTs) for several components of the project
 - Provided technical assistance to the proposal and sales teams
- **Junior Network Administrator** Grand Rapids, MI
Calvin College May 2004 - Aug 2007
 - Administered the internal network of Cisco switches
 - Administered various Linux and Solaris-based servers, including web, email, LDAP, mysql, internal monitoring, logging and DNS
 - Responsible for the development and maintenance of scripts and tools to maintain and improve network functionality, including scripts to ease system administration tasks.
 - Responsible for the design, development and maintenance of various web applications in perl. Applications included both internal scripts for employees and students and externally facing scripts for use by the general public.

- **Dean of the Chapels Office** Grand Rapids, MI
Calvin College February 2004 - May 2004
 - Website design and development
 - Worked on a team that designed and developed a web application for taking surveys in PHP with a MySQL backend
- **Junior Technician** Prairie du Chien, WI
Orion Computers September 2001 - August 2003
 - Primarily built new custom computer systems
 - Also made deliveries, service calls, computer repairs and customer demos
- **Self-Employed** Prairie du Chien, WI
Website Design June 2000 - August 2003
 - Taught myself website design (Java, Perl, HTML, CSS)
 - Started freelance web design business. Formed a sole proprietorship company in 2002.
 - Designed websites for six area businesses

Skills

- **Languages:** Fluent in C, C++, Perl, Java, SQL, HTML, CSS, JavaScript and \LaTeX . Familiar with PHP, Python. Limited experience with Ruby, ADA and PowerPC assembly.
- **OS:** Proficient with Linux, familiar with Solaris, *BSD, Windows experience.
- **Applications:** Proficient with Apache, MySQL, sendmail, bind (DNS), ISC DHCP, subversion and syslog-ng. Experience with postfix, postgresql, openldap, Dimensions, Telelogic DOORS, Microsoft office applications.
- **Miscellaneous:** TCP/IP networking, High-Performance computing and clusters. Parallel programming with threads and MPI, DO-178B, ARINC 653, image processing algorithms.

Academic Activities and Experience

- **Research Assistant** Lexington, KY
University of Kentucky Computer Science Department August 2007 - December 2008
 - Ported FDK-type Computed Tomography reconstruction algorithm to a Graphics Processing unit. Achieved 70x speedup over commodity x86 CPU.
 - Optimized the parallel (MPI) program for converting the output from a CT scan into a voxel set. Nearly halved the runtime of this program.
 - Worked on optimizing the program for digitally unwrapping a damaged document
- **Beowulf Cluster Administrator** Grand Rapids, MI
Calvin College Computer Science Department September 2005 - August 2007
 - Responsible for the administration and smooth operation of the Beowulf cluster
 - Assisted Dr. Joel Adams in designing the portable computational cluster, Microwulf.

- **Emulab Research** Grand Rapids, MI
Calvin College Computer Science Department October 2006 - August 2007
 - Assisted Professor David Laverell with the emulab, a laboratory for network emulation
 - Configured new nodes for emulab, general troubleshooting to get the lab operational
 - Fixed a problem on our emulab that resulted in an 8x increase in disk throughput
- **Abstraction** Grand Rapids, MI
Computer Science Club September 2004 - May 2007
 - *President* (2006-2007) - Ran meetings, developed agendas, organized colloquia.
 - *Vice-President* (2005-2006)

Publications

- On-site Scanning of 3D Manuscripts
Timothy H. Brom, James Griffioen, W. Brent Seales
Presented at Digital Humanities 2009
- Microwulf: a beowulf cluster for every desk
Joel C. Adams and Timothy H. Brom
SIGCSE '08: Proceedings of the 39th SIGCSE technical symposium on Computer science education