Anthony DiGirolamo

Phone: (602) 710-0457 – E-mail: anthony.digirolamo@gmail.com

Education

- **Masters of Science in Computer Science – In progress** GPA: 3.80
  Ira A. Fulton School of Engineering, Arizona State University – Tempe, Arizona 20 credit hours completed
- **Bachelor of Science in Computer Science – Completed 12/2006** GPA: 3.38
  Ira A. Fulton School of Engineering, Arizona State University – Tempe, Arizona 138 credit hours completed

Technical Skills

- Parallel application development in C and Fortran using MPI and OpenMP. Cloud application development using Java and the Apache Hadoop project. Additional Languages: Ruby, Python, and C++.
- Web application development with Ruby on Rails, JavaScript, CSS, and SQL including production level deployment with Linux, Apache, nginx, MySQL, PostgreSQL, Subversion, and Git.
- Comfortable with clustered Linux systems including shell scripting, the Torque resource manager, the Moab scheduler, and InfiniBand networking.

Work Experience

- **Technical Support Analyst Senior, High Performance Computing Initiative** 06/2010 – Present
  Arizona State University – Tempe, Arizona
  - Administered the Saguaro High Performance Computing (HPC) system which ranked 160 in the Top 500 Supercomputer Sites as of June 2009.
  - Communicated with end users to provide application configuration, installation, testing, and deployment.
  - Developed and delivered instructional short courses on parallel programming using the Message Passing Interface (MPI) on the Saguaro HPC system.
  - Supported the day to day operations using technologies such as: Moab, Torque, the Gold Allocation System, Request Tracker, CFEngine, System Imager, FlexLM, and building custom RPMs from source installs.
  - Interfaced with software and hardware vendors for upgrades and maintenance.
- **Web Application Developer, Integrum Technologies LLC** 01/2010 – 06/2010
  260 South Arizona Avenue – Chandler, Arizona
  - Designed, developed, and tested web applications using the Ruby on Rails framework.
  - Worked directly with clients daily using SCRUM and Agile techniques to ensure a high amount of communication, fast turn around times, and thoroughly tested code.
  - Performed a heavy amount of integration testing using Cucumber.
  - Followed Test Driven Development methodologies in a pair-programming environment with an emphasis on continuous refactoring.
  - Deployed production applications using technologies such as: MySQL, PostgreSQL, NGINX, Apache, Postfix, and Phusion Passenger.
- **Research Assistant, High Performance Computing Initiative** 2/2006 – 4/2008, 8/2008 – 12/2009
  Arizona State University – Tempe, Arizona
  - Designed and built GDBase, an off-line framework for debugging MPI applications. It provides a method for users to define debugger behavior, collect results to a database, and analyze the information post-mortem.
  - Assisted Saguaro users with MPI application development, debugging, profiling, and error diagnosis.

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  - Trained users in MPI introduction short courses that covered data decomposition, MPI data types, checkpointing with MPI/IO, and debugging using the GNU Debugger (GDB) and GDBase.
  - Streamlined error detection on Saguaro using a set of scripts to control job scheduling. If errors are found on a machine, staff members are notified, and jobs are then rescheduled to error free machines with no intervention.
  - Developed ASULinx, a prototype Ruby on Rails social networking tool designed to highlight interdisciplinary relationships and collaborative research in a graphical manner. (asulinx.asu.edu)

- **Subject Matter Expert, Lionbridge Technologies** 7/2009
  Microsoft – Redmond, Washington

  - Authored and revised questions for the Microsoft HPC 2008 certification exam.

- **Web Developer, Office of the Vice President for Global Engagement** 7/2008 – 11/2008
  Arizona State University – Tempe, Arizona

  - Updated ASULinx to fit the needs of the Global Engagement Department.
  - Collaborated with Esser Design on integrating new artwork.

- **Graduate Student Intern, HPC-3 Department** 5/2008 – 7/2008
  Los Alamos National Laboratory (LANL) – Los Alamos, New Mexico

  - Worked towards porting the Stack Trace Analysis Tool (STAT) for use on the high performance computing (HPC) systems at LANL.
  - Collaborated with developers at Los Alamos National Laboratory and Lawrence Livermore National Laboratory on the Development of STAT.

Publications

- "Architecture for an Offline Parallel Debugger"
  IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA), 12/2008.
- "A Scalable Framework for Offline Parallel Debugging"
  9th Linux Cluster Institute (LCI) International Conference on High-Performance Clustered Computing, 4/2008.