Nathan M. Jarus

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Objective   To obtain a Ph.D. in the field of Computer Science.

Education   B.S. in Computer Science, December 2013
Mathematics minor
Missouri University of Science and Technology
GPA: 3.7 /4.0

Experience

Software Engineer, Amazon, Seattle, WA   Summer 2013
- Designed a method of using the AAA protocol to vend security credentials for generic resources
- Implemented a service to use this design for delivering temporary AWS credentials to applications
- Set up continuous deployment, metrics, and monitoring for this service
- Service was launched to production successfully

Software Engineer, Amazon, Seattle, WA   Summer 2012
- Launched to production a self-service scaling web portal
- Added features through all layers of the web portal
- Created a MapReduce program to parse gigabytes of logs and store the results into a database

Software Engineer, Garmin International, Kansas City, KS   Summer 2011
- Modified the routing algorithm to log better statistical data
- Created software to analyze generated routes and determine overall fitness of route algorithm
- Developed a system to allow other engineers to easily test route algorithm changes

Software Engineer, Softek Solutions Inc, Kansas City, KS   Summer 2010
- Developed a REST API in C#
- Developed an Android application that interfaced with the REST API
- Designed a generic base library for future company Android projects

Undergraduate Researcher, Dept. of Electrical and Computer Engineering,
Missouri S&T, Rolla, MO   1/2012-Present
- Research work on electrostatic discharge effects on embedded systems
- Developed methods for using software to diagnose which specific parts of hardware have experienced ESD
- Studied and modified Linux kernel drivers to trace the effects of ESD at the software level

Systems Researcher and Administrator, IT Research Support,
Missouri S&T, Rolla, MO   1/2010-Present
- Developed a FUSE filesystem wrapper to support advanced Linux filesystem operations on a network filesystem
- Developed and integrated a system for real-time 3D visualization of terabyte data sets

- Developed software to convert a generic dataset to a specific format for the vizualisation system
- Supported research projects with both hardware and software
- Administrated all on-campus linux machines
- Migrated campus linux distribution from Red Hat to Ubuntu

Peer Learning Assistant, LEAD, Missouri S&T, Rolla, MO   8/2010-12/2011
- Tutored students in introductory C++ classes
- Helped students with issues in the assignments
- Clarified and explained what is taught in the classroom

Publications

- **Software Instrumentation For Failure Analysis of USB Host Controller**
  Authors: Antonio Sabatini, Nathan Jarus, Pratik Maheshwari, Dr. Sahra Sedigh
  2013 IEEE International Instrumentation and Measurement Technology Conference
- **Old Ideas in a New Age: Descartes' Influence on Modern Animal Farming**
  Authors: Nathan Jarus
  2012 Missouri S&T Undergraduate Research Conference, First place in Arts and Humanities

Extracurricular Activities

- Student Researcher, Driving Simulator: developing combined traffic model
- **Vice President,** Association for Computing Machinery   8/2010-5/2011
- Developed open-source project dfshack (`https://github.com/LinuxMercedes/dfshack`)
- Volunteer Data Structures Tutor
- Megaminer AI Competition Contestant

Computer Skills

Languages:	C++, Java, Perl, Python, BASH, SQL, LaTeX, flex, yacc
Frameworks:	Hadoop, Spring, Android, Pylons, Swing, Linux Kernel
Software:	GNU Toolchain, vim, Eclipse, Visual Studio, Git, Subversion
Operating Systems:	Linux (Red Hat, Ubuntu, Arch, Embedded), Windows 7/Vista/XP, Mac OS 10.5/10.6