charliemeyer

software artist, computer scientist, open source enthusiast, tinkerer

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Github
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tongue

native english,
professional spanish
proficiency

professional summary

High energy, creative and focused individual with excellent track record working in matrixed and dispersed team environments, recognized for leadership and team building skills, adept in oral and written communications.

objective

To obtain a full time position in the software engineering field at a dynamic high tech company.

education

2010-2012 **Masters of Science** computer science — University of Illinois, Urbana-Champaign
Specialization: Software Engineering, Software Architecture, Design Patterns, Next Generation Computer Science Education
Thesis: CoMoTo: The Collaboration Modeling Toolkit

2005-2010 **Bachelor of Science** computer science — University of Illinois, Urbana-Champaign
Specialization: Software Engineering, Information Assurance

industry experience

2014-Present **HomeAway** — Austin, Texas
Senior Software Engineer
At HomeAway, I am a senior software engineer on our core platform team which covers our internal high-traffic REST API, enterprise messaging busses and NOSQL stores. My primary focus is on guiding our development teams and architects on how to engineer quality into their projects from the onset and throughout the software development lifecycle. I daily deal with technologies such as RabbitMQ, Elasticsearch, Kibana, Hadoop, Storm, Kafka, Samza, MSSQL, and Splunk among many others.
Detailed achievements:

- Led and architected the backend quality effort to roll out HomeAway's new owner inbox, caching and entity search applications based on Elasticsearch and Cassandra
- Developed HomeAway-specific Ruby libraries to communicate with our internal infrastructure including Elasticsearch, Microsoft SQL Server, Opsview, RabbitMQ, Kafka, Cassandra and our core platform APIs
- Mentored the 3 Day Startup Program sponsored by HomeAway both in Austin, TX and London, UK
- Architected, developed, and open-sourced the HomeAway Ruby SDK for the HomeAway Developer API
- Open-sourced a Ruby library for communicating with Apache Storm clusters on behalf of HomeAway
- Developed and delivered quarterly training sessions to the engineering organization covering HomeAway's platform architecture and each of its component technologies
- Organized workshops for our engineering orginazation to bring in distinguished speakers in the Computer Science field

2012–2014 **IBM** Austin, Texas

Staff Software Engineer

Responsible for Power7+ AIX bring-up including integrated system test as well as an integral member of the Cluster Aware AIX team, the backbone of the clustering capabilities of the IBM enterprise grade UNIX operating system, which is an underlying component of IBM PowerHA and VIOS SSP. As part of that team, I led the effort to maintain, refactor, and enhance the AIX cluster communications daemon.

Detailed achievements:

- Led the AIX effort to certify Oracle Real Application Clusters database on PowerHA
- Enhanced AIX clustering to scale to 32 nodes and 1024 disks per node, including parallelization of core clustering libraries
- Enabled unicast AIX cluster heartbeating
- Enabled dynamic network configuration change support across clustered systems
- Co-author of a clustering algorithm patent
- Leader of IBM quality management for AIX Austin

2010-2011 **IBM** Austin, Texas

Power Systems Test Engineer Co-op

Architected and developed an automated functional test suite composed of approximately 130 test cases for IBM Power Systems firmware using Rational tools, including Rational Functional Tester and Rational ClearQuest. Deployed existing and new code bases to Rational Quality Manager for usage by remote teams. Performed intensive Power Systems debugging, installs, and triage.

2008-2009 **IBM** Rochester, Minnesota

Power Systems Performance Co-op

Worked as a member of a team to benchmark systems, analyze performance data, develop workloads, perform maintenance on IBM Power Systems, and develop tools to aid in performance analysis. Worked with a variety of teams to turn technical challenges into useful tools to expedite performance work. Key skills include IBM i5/OS, Java, JDBC, IBM DB2, SQL, stored procedures, AS400 control language, IBM Hardware Management Consoles, and IBM Power systems.

- Created an automation framework to streamline TPC-C benchmarks
- Developed the front-end and CL/C++ harness for a new implementation of TPC-E for IBM i
- Architected and developed an API to access Collection Services, PEX, JobWatcher, and DiskWatcher data from IBM i in Java
- Developed software to generate reports summarizing system performance from benchmark runs
- Created automation tools for enhancing and streamlining benchmark workflows

2007-2008 **Solidware Technologies** Champaign, Illinois

Software Engineer Intern

Worked as a member of an agile team developing a J2EE web based application which performed static code analysis using Spring, Hibernate, JavaCC, H2, Emma, and Docbook. Used automated building and testing with Hudson.

academia experience

2012 **Univeristy of Illinois, Department of Computer Science** Urbana, Illinois
Instructor
Instructor for graduate course on object-oriented programming, object-oriented design, and design patterns. Worked extensively with Smalltalk as a means to relay the concepts of the course and mentored several small group project teams on semester long object-oriented Smalltalk projects. Mentored by Gang of Four member Ralph Johnson.

2010-2012 **Univeristy of Illinois, Department of Computer Science** Urbana, Illinois
Graduate Teaching Assistant
Lead teaching assistant for software engineering and design course. Led weekly discussion sections focusing on proper program design, composition, and testing. Developed and delivered new lecture content to audiences of over 140 students and created new compounding programming assignments for students to complete. Gave weekly lectures to large audiences. Course objectives focused on writing clean, modular, and maintainable code in a variety of languages including C, C++, C#, Java, Python, and Ruby. Other topics covered included Agile methods, proper testing and TDD, design patterns, build management, development environments, and revision control. The main themes that were taught focused around the practical side of software engineering and preparing students for full time careers in the field.

2007-2010 **Univeristy of Illinois, Department of Computer Science** Urbana, Illinois
Undergraduate Teaching Assistant
Teaching assistant for software engineering course mentioned above.

2007-2012 **Univeristy of Illinois, Department of Computer Science** Urbana, Illinois
CoMoTo Research Project Leader
Designed and built a system for detecting and visualizing instances of collaboration and plagiarism in student code submissions for programming assignments. Used lexicographical analysis and advanced data structuring and storage, along with a variety of libraries and frameworks to deploy the solution as a dedicated web application. Worked with professors of courses to determine system requirements and built the system into a hosted service for the Department of Computer Science. Worked with course staff to apply the system to analyze current code submissions.

2009-2010 **Univeristy of Illinois, Department of Computer Science** Urbana, Illinois
Research Assistant
Researcher on the Medical Device Plug and Play (MDPnP) project. Our group's goal was to design a flexible software architecture for complex systems of networked medical devices in a clinical setting. We initially mocked a system using the JavaScript programming language and reworked the architecture using a variety of technologies, including Java, JSON, and CouchDB. In addition to the direct medical architectures we proposed, we also developed and released a JavaScript framework for ensuring object-level security in the browser.

awards

2011 **Outstanding Teaching Assistant Award** College of Engineering, University of Illinois
Awarded to the top teaching assistants in the college as voted by the student body.

2004 **Eagle Scout** Boy Scouts of America

2005 **Vigil Honor Award** Boy Scouts of America, Order of the Arrow Honor Society

2007-2012 **American Leadership Academy** Cabo San Lucas, BCS, Mexico
University Leader, Adult Mentor

interests

PROFESSIONAL:

- **languages:** Java, JavaScript, C, C++, C#, Objective-C, Ruby, Python, SQL, SQL PL, Erlang, BeanShell, Scala, Groovy, PHP, Perl, Bash and Korn scripting, HTML, CSS, XML, XSLT, UML, AS400 CL, Rxx, Matlab, Smalltalk (Pharo), Maude, LaTeX
- **frameworks/libraries:** Spring, Hibernate, Ant, Ruby on Rails, JUnit, log4j, YUI, Prototype, Scriptaculous, jQuery, Jasmine, RSpec, Swing, SWT, GWT, Pylons, SQLAlchemy, Elixir, Pyramid, Seaside, Joomla, Android application development, Eclipse plugin developments
- **data stores:** MySQL, Elasticsearch, Cassandra, Riak, SQLServer, Oracle (including RAC), IBM DB2, Postgres, SQLite, H2, Derby, CouchDB
- **big data:** Hadoop, Kafka, Hive, Storm, HBase, Spark, Samza, YARN, ZooKeeper, Avro, Hunk
- **development environments:** Eclipse, Netbeans, JetBrains IntelliJ Idea, Aptana Studio, Pharo, Squeak, vim
- **operating systems:** Linux (Ubuntu, RHEL and derivatives, SuSE SLES), Mac OS X, IBM AIX, IBM i5/OS
- **other:** Subversion, Mercurial, Git, Jenkins, TeamCity, docker

ACADEMIC: object-oriented design patterns, enterprise application architecture, next-generation systems architecture, static program analysis, optimization by specialization, information integrity and assurance, distributed systems, next generation computer science education
PERSONAL: f1 racing, downhill skiing, world travel, culinary creativity and experimentation

publications

patents

Enhanced Mechanisms for Granting Access to Shared Resources

E. Cruz-aguilar, P. Ganesh, M. Kandasamy, C. Meyer, S. Tovcimak

US Patent 20150089059, 03-26-2015

URL: `http://appft1.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PG01&p=1&u=/netahtml/PTO/srchnum.html&r=1&f=G&l=50&s1=20150089059.PGNR.`

thesis

CoMoTo: The Collaboration Modeling Toolkit

C Meyer

MS Thesis

University of Illinois at Urbana-Champaign, Aug. 2012

URL: https://www.ideals.illinois.edu/handle/2142/34353

international peer-reviewed conferences/proceedings

Programming Studio: Advances and Lessons Learned

C. Meyer, M. Woodley

ITiCSE, 2012, Haifa, Israel

URL: `http://dl.acm.org/citation.cfm?id=2325384`

CoMoTo: The Collaboration Modeling Toolkit

C. Meyer, C. Heeren, J. Tedesco, E. Shaffer

ITiCSE, 2011, Darmstadt, Germany

URL: `http://dl.acm.org/citation.cfm?id=1999789`

technical reports

Mocking an Integrated Clinical Environment with JavaScript

C. Meyer

University of Illinois at Urbana-Champaign, Aug. 2009

URL: https://www.ideals.illinois.edu/handle/2142/29945

JavaScript: Bringing Object-Level Security to the Browser

C. Meyer, M. Rabb

University of Illinois at Urbana-Champaign, May 2009

URL: https://www.ideals.illinois.edu/handle/2142/29944