charlie**meyer**

software artist, computer scientist, open source enthusiast, tinkerer

contact

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Github
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*Please do not contact
me if you work for a
recruiting agency.*

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

HomeAway   Austin, Texas

Senior Software Engineer

At HomeAway, I am leading the effort to unify our front-end ruby-based testing infrastructure to also cover our API, enterprise messaging, big data, and other platforms. My primary focus is on guiding our development teams and architects on how to engineer QA into their projects from the start, by communicating with them on a technical CS level that they can relate with. I also am the lead developer and architect on our several of our Ruby gems used to communicate with and test our backend services. I daily deal with technologies such as RabbitMQ, Elasticsearch, Kibana, Hadoop, Hive, Storm, Kafka, Solr, MSSQL, Spring, git, IntelliJ IDEA, TeamCity, Jira, Confluence, QuickBuild, RRDTool, Splunk, among many others.

Detailed achievements:

- Led and architected the backend quality effort to roll out HomeAway's new owner inbox application based on Elasticsearch
- Developed HomeAway-specific Ruby libraries to communicate with our internal infrastructure including Elasticsearch, Microsoft SQL Server, Opsview, RabbitMQ, and our core platform APIs
- Delivered PoC work to integrate the Jolokia JMX library into the HomeAway backend stack
- Developed and delivered training sessions to the QA and development organizations covering HomeAway's platform architecture and each of its component technologies
- Led and architected the quality effort for our new platform search service based on Elasticsearch
- Organized workshops for our engineering group to bring in distinguished speakers in the Computer Science field
- Led and architected the quality effort to roll out a new caching infrastructure for our high traffic API based on Elasticsearch
- Continually delivered atomic load test suites to perform load and scale analysis across many of our core platform applications
- Organized, verified, and led over 75 live production releases of our core platform applications
- Provided continual platform support to engineers and quality assurance tem members across the organization

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 clutering algorithm patent
- Leader of IBM quality management for AIX Austin

| 2011-2012 | **IBM** | Champaign, Illinois |

Campus Representative

Campus representative for the University of Illinois at Urbana-Champaign. Co-ordinated with IBM HR and recruiters to organize events to promote IBM on campus to students across campus. Actively pursued and recommended new candidates for engineering positions.

| 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

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. Key responsibilities included:

- Developing new application functionality
- End to end QA, including unit testing, integration testing, and regression testing
- Writing product documentation and transforming it across a variety of mediums
- Participating in product launch strategy
- Translating business needs into technical requirements

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, PHP, Perl, Bash and Korn scripting, HTML, CSS, XML, Docbook, XSLT, UML, AS400 CL, Rxx, Matlab, Smalltalk (Pharo), Maude, SQL, SQL PL, Elixir, Erlang, BeanShell, Scala, Groovy, Lisp, Fortran, Haskell, LaTeX

- **frameworks/libraries:** Spring, Hibernate, Ant, Ruby on Rails, JUnit, log4j, YUI, Prototype, Scriptaculous, jQuery, Jasmine, Swing, SWT, GWT, Pylons, SQLAlchemy, Elixir, Pyramid, Seaside, Joomla, Android application development, Eclipse plugin development, vim plugin development, Wordpress

- **data stores:** MySQL, Oracle (including RAC), IBM DB2, Postgres, SQLite, H2, Derby, CouchDB, Elasticsearch

- **big data:** Hadoop, Kafka, Hive, Storm, HBase, Spark, ZooKeeper, Avro, Hunk

- **development environments:** Eclipse, Netbeans, JetBrains IntelliJ Idea, Microsoft Visual Studio, Aptana Studio, JetBrains PyCharm, Pharo, Squeak, vim

- **operating systems:** Linux (Ubuntu, RHEL and derivatives, SuSE SLES), Windows, Mac OS X, IBM AIX, IBM i5/OS, Cisco IOS

- **other:** Subversion, Mercurial, Git, IBM CMVC, Jenkins, Selenium, Rational tools including Rational Functional Tester, Rational Performance Tester, Rational Quality Manager, Rational ClearCase and Rational ClearQuest, IBM PowerHA, IBM VIOS, IBM HMC, IBM SDMC, IBM FSP and BPC, Brocade and IBM SAN switches, IBM System Storage, EMC Storage, Hitachi Storage

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://www.freepatentsonline.com/y2015/0089059.html`

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`