

Chris Riddoch

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<https://syntacticsugar.org>

<https://github.com/riddochc>

Skills

- Excellent communication and presentation skills, able to convey complex ideas simply
- Expertise with a wide variety of programming languages (see right)
- 20+ years experience using and administering Linux server and desktop environments: OpenSUSE, Ubuntu/Debian, Fedora/RHEL/CentOS
- Extensive knowledge of software development, database design, and system administration subjects
- Deep understanding of textual data collection and analysis, open-source databases (PostgreSQL, MySQL, SQLite)
- Skilled in use of version control, issue/ticket management tools (Github, Bugzilla), Agile development methodology
- Able to design experiments and analyze data; practical knowledge of applied statistics and probability
- Experience tutoring individually and teaching larger groups on a variety of subjects at an appropriate level for the audience
- Insatiable curiosity for a wide variety of subjects, highly practiced at learning through self-study

Recent Experience ↑

Ruby
Javascript
Rust
C
Clojure/Java
Python
R
Perl
Forth
Haskell
TeX
OCaml
Assembly

Selected Professional Experience

RSAE Labs, 2016-2017

- Evaluated a pre-existing CentOS server to identify and document non-default configuration settings, packages installed, and potential security vulnerabilities
- Migrated large Java application to current versions of CentOS running on Amazon Web Services
- Optimized client's use of AWS systems (EC2 and S3) for cost savings and service utilization
- Located and identified dependencies and potential compatibility issues in enterprise Java application
- Tuned MySQL and isolated proprietary data during transition from co-located facility to AWS
- Wrote 9k+ words of documentation about the AWS migration process, existing configuration and changes

Morningnotes.com, 2016

- Devised solution to migrate data from legacy PostgreSQL 8.1 install to 9.5 using custom replication logic
- Merged older system configuration options into a new Debian server, automating the process with Ansible
- Updated web application code from Ruby 1.8 and pre-1.0 Rails to run on Ruby 2 and Rails 4 API
- Scripted custom database reports, generating native Microsoft Excel format to remedy CSV formatting issues
- Maintained legacy web server and existing custom environment while designing and building replacement

Welltok, 2015

- Built a virtual machine environment to use for development/testing of microservice instances with Docker and Qemu/KVM
- Traced data flow through complex microservice architecture implemented in multiple languages
- Read a substantial amount of code in order to make modifications to a product's core features
- Defined JSON-Schema model for REST APIs; designed tools for API testing with Sinatra, Faraday, and Alpaca Forms

National Renewable Energy Labs, 2014

- Created an information extraction application to convert tabular data from PDFs using OCR into a database
- Customized and deployed a virtual machine application to users; provided basic Linux command-line training
- Built and maintained private Git and Rubygems server for application version management
- Learned the specification for the OpenDocument Format quickly and wrote code to manipulate ODF files
- Wrote complete documentation for software, including a specialized introduction to Linux

University Center of Atmospheric Research (UCAR) Globe Project, 2013

- Set up dual-OS environment for development with MacOS and Linux using VirtualBox
- Taught workflows of version control with git to coworkers, provided assistance with resolving conflicts in large merges.
- Developed custom changes to acts_as_versioned rubygem to satisfy internal requirements for data versioning

Symplified, 2013

- Wrote scripts and custom SSH configurations to span multiple firewalls and networks for test infrastructure
- Researched system automation tools (Puppet, Chef, Vagrant) for constructing repeatable test environments
- Served as primary resource for information on Linux distribution customization for server deployment.
- Migrated 5+ years of previous development history from Subversion to Git, assisted in setting up an internal Github server

Reframeit, 2009

- Created spam filter for web-submitted comments in Clojure using CRM114 for classification
- Implemented discovery of related content and full-text search with Solr/Lucene
- Evaluated language-independent strategies for using distributed databases in a web application backend

Cognitive Avionics, 2008

- Analyzed an existing custom hardware platform for software portability issues
- Built a speech recognition demo with custom vocabulary using CMU Sphinx
- Taught coworkers about revision control using Git and development methodologies
- Researched embedded Linux platforms for DO-178B (FAA) regulatory compliance
- Developed project feasibility study and conducted project estimation

Digeo, 2008

- Centralized logging of status messages and remote access to test machines with conserver
- Created ruby scripts to automate tests, system updates, configuration, and other common procedures
- Implemented Rails-based command-and-control system for running and recording results of tests
- Documented test procedures, use cases, and results, helping other developers discover and resolve bugs

Education

- University of Colorado, Boulder – Graduated December 2004 with concurrent Bachelor and Master degrees in Linguistics, minors in Computer Science and German,
- Certificates in Cognitive Science and Human Language Technology (Computational Linguistics)
- Significant courses at CU Boulder: natural language processing, digital logic, advanced semantics, programming languages, operating systems, cognitive science, human-computer interfaces, statistics
- Additional courses in 2010, Metro State College of Denver: speech pathology, psychology, physics

Open Source Contributions

- Instrumented the ruby interpreter with the LTTng tracing framework enabling greater understanding of the runtime behavior of large applications
- Participation in a variety of local meetups and workshops on software development
- Tutored high-school students on introductory programming subjects 2016, Railsbridge workshops 2012-2015, mentored students of classes offered by local coding schools.
- Taught and helped many individuals and organizations to use and/or develop for Linux-based environments

Volunteer Experience

Boulder Community Hospital, 2-4 hrs/week since March 2016, conducting hearing screening tests for newborns

- Conducted AABR and OAE screenings with Natus Echo-Screen, Echo-Screen III, and Algo 5 equipment
- Direct patient interaction, communicating with parents about the screening test and results.
- Training of new volunteers, collaborated with nurses and audiologists for patient care.
- Charting records of patient information and test results

Boulder Flood Relief, Oct. 2013

- Requirements gathering and evaluation of emergency management software tools for relief organizers

Boulder Linux Users Group, from ~2001-2007, participant since 1997

- Arranging for and preparing monthly speakers, locations for meetings and installfests, etc.

United Ministries in Higher Education, 1999-2003

- Repaired homes (construction of outdoor stairs) in rural Appalachia: spring break 2003
- Helped rebuild (drywall installation) a burned church in Gadsden, SC: spring break 1999

Awards

- National Louis Armstrong Jazz Award, 1996-97 school year, participant at state-level Honor jazz band
- Top student in Fruita Monument High School Band program, 1996-97 school year