Chris Riddoch

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Skills

* Excellent communication and presentation skills, able to convey complex ideas simply
* Expertise with a wide variety of programming languages: Ruby, Javascript, Rust, Clojure/Java, C, Python, Haskell, R, Perl, Forth, TeX, OCaml, Assembly
* 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)
* 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

Selected Professional Experience

RSAE Labs, June. 2016 – Feb. 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, Jan – July 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, May – Aug. 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 and designed tools for API testing with Sinatra, Faraday, and Alpaca Forms

National Renewable Energy Labs, Feb. - June 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, Aug. – Nov. 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 gem to satisfy internal requirements for data versioning

Symplified, May - July 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, July – Sept. 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, Feb. - July 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, July - Oct. 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