Carlos F. Ramírez

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EDUCATION

CORNELL UNIVERSITY

BA IN MATHEMATICAL PHYSICS
College of Arts and Sciences
May 2011 | Ithaca, NY

SKILLS

LANGUAGES

Python	100K+ lines
Bash	20K+ lines
JavaScript (ES5)	10K+ lines
C	5K+ lines
C++	5K+ lines
Octave/Matlab	1K+ lines
LaTeX	1K+ lines
Ruby	1K+ lines
Haskell	Familiar

TECHNOLOGIES

Databases
SQLite • MySQL • MongoDB
Frameworks
Flask • Express/NodeJS • ReactJS
Ionic • Apache Cordova • AngularJS
Version Control & Deployment
Git • SVN • Jenkins CI
Operating Systems
RedHat • Debian • Arch • OS X
Other
ZeroMQ • JSON • YAML
PyPEG (Parser Generator)
Scrapy (Web Scraping Framework)
Amazon Web Services (AWS)

ADDITIONAL

Read, write, and speak Spanish

INTERESTS

Track Motorcycle Riding
Snowboarding • Skateboarding
Cycling • ITF Taekwon-Do
Chess • Guitar

EXPERIENCE

RACKSPACE, INC. | SOFTWARE ENGINEER IN TEST

2016 | San Antonio, TX
- Worked on the testing framework and test bank for Rackspace's Oracle BRM billing management system. Improved test throughput enabling daily runs of the system, standardized test data generation for all account/product combinations, and provided an API for other services to use to test BRM. Python 2 on OS X for development, tests running on Ubuntu Linux through Jenkins.

MONSANTO CO. | SOFTWARE DEVELOPER

2015 | St Louis, MO
- Worked on the frontend of a data entry web application for agricultural crop projections and their analysis using ReactJS and a customized version of Bootstrap, deployed to AWS. Javascript (ES6) and JSX through Babel.

BLOOMBERG, L.P. | FINANCIAL SOFTWARE ENGINEER

2011 - 2014 | New York, NY
- Took over lead development of a distributed system to process the sanitization, storage, and QA of servicer data for over 60,000 securities. Introduced ZeroMQ to improve redundancy and scale up to 196 nodes with real-time job control. Python 2 on Red Hat Linux (RHEL 5 & 6).
- Led development of a YAML-based language for extraction of financial data from XLS, PDF, and TXT files in dozens of individual formats. Coordinated with a team of 50 analysts in NYC and Shanghai to develop version-controlled extraction scripts for over 60,000 securities from 25 servicers worldwide. Python 2 on Red Hat Linux (RHEL 5 & 6).
- Worked on a 3+TB SQLite/MongoDB database of all historical mortgage loan data in the United States and the code which generates new monthly data from various sources, made available to tech and business teams and terminal clients. Designed and implemented a statistical method to detect incorrect or incomplete loan data, in addition to a numerical approach to "filling in" missing pieces of data to use in cashflow projections. Python 2 on Red Hat Linux (RHEL 5 & 6).

CORNELL UNIVERSITY | TEACHING ASSISTANT, PHYSICS DEPT.

2008 - 2011 | Ithaca, NY
- Tutored physics courses covering Mechanics, Electricity and Magnetism, Waves, Optics, and Thermodynamics

RESEARCH

CORNELL UNIVERSITY | LAB ASSISTANT

2006 - 2009 | Ithaca, NY
- Assisted *Prof. Tomas Arias* with building and administering a 48-node supercomputer. Ran density-functional theory calculations through DFT++ with Python 2 and Octave.

FLORIDA INTERNATIONAL UNIVERSITY | LAB ASSISTANT

2006 - 2011 | Miami, FL
- Worked with *Prof. Kenneth Furton* to develop and maintain Java and Excel VBA data analysis software, investigating the chemical composition of human scent.

PUBLICATIONS

[1] A. M. Curran, C. F. Ramirez, A. A. Schoon, and K. G. Furton. The frequency of occurrence and discriminatory power of compounds found in human scent across a population determined by spme-gc/ms. *Journal of Chromatography B*, 2007.