Carlos F. Ramírez

cramsoftware@gmail.com | Based in Houston, TX

EDUCATION

CORNELL UNIVERSITY
BA in Mathematical Physics
College of Arts and Sciences
May 2011 | Ithaca, NY

SKILLS

LANGUAGES

Python	Very Proficient
Bash / ZSH	Very Proficient
JavaScript	Proficient
C	Familiar
C++	Familiar
Octave/Matlab	Familiar

TECHNOLOGIES

Databases
AWS Athena • AWS S3
PostgreSQL • MySQL • MariaDB
SQLite • MongoDB • Redis
JPMorgan Athena

Frameworks
FastAPI • Tornado • Flask
ReactJS • AngularJS • NodeJS
React Native • Ionic

Version Control & Deployment
Github • Git • SVN
Github Actions • Jenkins CI
Docker • Kubernetes

Operating Systems
RedHat • Debian • Arch • OS X

Other
Amazon Web Services (AWS)
Apache Kafka • RabbitMQ
Pandas • Modin
ZeroMQ • Selenium

ADDITIONAL

Team management and mentoring
Technical writing and communication
Technical training and teaching
Read, write, and speak Spanish

RELEVANT EXPERIENCE

HARTREE PARTNERS, INC. | Sr. Software Engineer
2022 - 2024 | Houston, TX
- Implemented borrowing base models and APIs for lenders aggregating all asset values from 15 ETRM systems, feeding both web and BI frontends. Developed a data processing framework on top of Modin outperforming Apache Beam, speeding up model runs tenfold. Python 3.8 on AWS
- Developed streaming APIs to process and aggregate ETRM data for front and middle office systems. Python 3.8 on AWS

JP MORGAN CHASE & CO. | VP. Software Engineer
2017 - 2021 | Houston, TX
- Led the development team for a web application governing Market Risk trading limits, responsible for both application architecture and feature delivery of a team of 8 developers. Python 2.7 on RedHat Linux through the Athena platform, Python 3.6 on K8s, ReactJS for frontend served out of CloudFoundry.
- Developed post-trade technology for the FX Cash and FX Options business on the Athena platform processing 1M+ daily trade events. Led the onboarding of exotic FX Options assets to decommission external systems. Python 2.7 on RedHat Linux through the Athena platform.
- Collaborated with development teams across the bank to migrate to the cloud through the CTO Accelerator Program. Covered everything from CI/CD patterns to microservice decomposition to migration of desktop applications to the web with ReactJS, across CloudFoundry, K8s, and AWS. Designed and ran two-week AWS training programs for engineers of various levels.

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 Ubuntu

MONSANTO CO. | Software Developer
2015 | St Louis, MO
- Developed an agricultural projection application. ReactJS/NodeJS on AWS

BLOOMBERG, L.P. | Financial Software Engineer
2011 - 2014 | New York, NY
- Worked on a cashflow projection engine for structured finance assets, modeling mortgage-backed securities given dynamic forecasted loan repayment scenarios.
- Led development of a system to process the sanitization, storage, and QA of servicer data for over 60,000 mortgage-backed securities. Introduced ZeroMQ to improve redundancy and scale up to 196 nodes with real-time job control. Python 2 on Red Hat 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 6
- Worked on a 3+TB SQLite/MongoDB database of all historical mortgage loan data in the United States and monthly update logic from various sources, and aggregation APIs for tech and business teams and terminal clients. Python 2 on Red Hat 6