

BUCK RYAN

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EDUCATION

Drexel University, Philadelphia, PA

B.S. Mathematics

Computer Science Minor

September, 2006 - June, 2011

GPA – 3.84

Magna cum Laude

EXPERIENCE

Senior Software Engineer

RJMetrics / Magento
Philadelphia, PA

May 2012 - Present

- Regularly planned and led projects to completion, with responsibilities such as:
 - Collaborating with other teams, CEO, and COO to gather requirements and design projects
 - Leading sprint planning and daily stand-ups
 - Identifying bottlenecks and inefficiencies over the life-cycle of the projects
 - Determining and gathering metrics to assess success
- Was a key designer of our microservice architecture and created best practices for database design, code structure and quality, and service APIs. Examples of services:
 - In 2017, was primary engineer of a service designed to ingest large number of small – medium size data sets and generate a set of predefined reports in HTML format. Was implemented in Clojure using SQLite to load and process the data, finally saving the reports to S3
 - Led development of a service which ingests billions of rows each day from MySQL and writes the data in batches to multiple locations. It is also responsible for launching, monitoring, and balancing users across Redshift clusters and PostgreSQL instances
 - Created a service responsible for encrypting and storing client database credentials. Used KMS for encryption & decryption.
- For much of the last 1-2 years, have been the lead on designing and implementing our infrastructure in the absence of a formal DevOps team
 - Redesigned our deployment strategy from using AWS OpsWorks to using Jenkins Pipeline and Chef Server. This decreased deployment time from 30-50 minutes down to under 5 minutes and made deployments significantly more stable.
 - Developed a tool in Python which handled the encryption and storage of environment variables for all of our micro-services.
 - Launched a subset of our infrastructure in a European AWS region. This included setting up a site-to-site VPN (using OpenSwan) between the US and EU.
 - Led the initiative to begin using Terraform to manage our AWS infrastructure and later designed internal best-practices for using Terraform.
 - Overhauled our AWS IAM permissions model in 2015-2016 to get a more understandable and flexible system.
- Was a key contributor to the “Pipeline” product in 2015 (which later spun out as a separate

company – Stitch Data), which streams data from many cloud and database sources into a Redshift data warehouse.

- Wrote an Apache Spark application which pulled data from Kafka, deconstructed nested JSON records into flat table structures, and wrote back to Kafka (to be later sent into Redshift).
- Deployed ZooKeeper, Kafka, and Spark clusters within AWS and created tooling for managing them.
- Was one of three principle developers of the main PHP codebase (apprx. 500K lines of code).
 - Often designed and enforced best practices
 - Identified and created projects to resolve key pain points in the code.
 - Wrote many new features and squashed many bugs, such as:
 - Rewrote a key process into a multi-process system for parallelization and to isolate failures
 - Created a new billing system based on Braintree and moved off of Authorize.net
 - Profiled and optimized pages, in one case taking a key administration page from loading in several minutes (sometimes timing out) to loading in seconds
- Was the main contributor and owner of our early deployment software (called “Butters”), which was in use from 2013-2016. Became a main contributor to its successor in 2016. Both were written in Python.
- Gave various talks to educate team members on best practices for things like: database design, error handling in PHP, and how to be more efficient in bash.

SKILLS

	More Experience	Some Experience
Languages	Clojure, Python, Bash, PHP, Java	Javascript, C, C++, Haskell, Lua, Ruby
Databases	PostgreSQL, MySQL, Redshift, Redis	Mongo
Ops	Terraform, Chef, Jenkins	Ansible
Other	Kafka, ZooKeeper	Spark
Platforms	AWS	DigitalOcean

HOBBIES AND SUCH

- Author of Farmhand (Clojure background processing library): <https://github.com/b-ryan/farmhand/>
- Maintainer of powerline-shell (>2500 GitHub stars): <https://github.com/banga/powerline-shell>
- Play flute (15-20 years), Cello (2.5 years), and Piano (½ year)
- Have studied in Germany twice, during which I visited 19 cities in 9 countries in Europe
- Currently learning Spanish

LINKS

Homepage - buckryan.com

GitHub - <https://github.com/b-ryan>