Brian Zambrano

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I'm a software engineer and architect with a wide technical breadth and deep understanding of many systems. My background has led me to cloud-based SAAS application architecture, design, and scalability. I have high attention to detail, excellent verbal and written skills, and am driven to produce robust, high-quality, user-friendly software. For the past 15+ years, my primary programming language and ecosystem has been Python. However, I enjoy and am capable of jumping into different languages and ecosystems.

I have been working with Amazon Web Services (AWS) consistently since 2009. My recent focus has been cloud architecture on AWS using microservices, containers and the vast array of AWS services.

Technical Skills

Primary Languages	Python, SQL, JavaScript/ES6, Shell scripting (sed, awk, sh, make)
Other languages	Objective-C/C, Elixir, Go, Java
Databases	Postgres, MySQL, MongoDB, Redis, Elasticsearch, DynamoDB
Frameworks/systems	Django, Flask, Docker, Django Rest Framework, nginx, Serverless, uwsgi, RabbitMQ, Kubernetes, React, jQuery
AWS services	EC2, ECS, RDS, Elasticache, Lambda, API Gateway, Kinesis, SNS, SQS, S3 VPC, CloudFormation, ELB, Route53, IAM, Lex, Alexa, etc.

Professional Experience

Very, LLC. (Chattanooga, TN)
Engineer (9/16 - present)

- Working with various clients to deliver high quality and well tested digital products in a timely manner. Projects have ranged from data science and ETL pipelines to Amazon Alexa skills and web applications.
- Leading the adoption of AWS within the company, tutoring colleagues and giving training on different AWS services and techniques with a heavy bias towards serverless architectures
- Authored Amazon Alexa Skill for client, delivering first version in two weeks which included an open source Python library, Lazysusan: documentation and source code

Clearcare, Inc. (San Francisco, CA)
Lead Architect (6/14 - 8/16)

- Initiated and led movement from a monolithic Django application into a microservice architecture
- Authored open-source Python service framework: `https://github.com/brianz/servant`
- Designed Docker-based infrastructure on top of the AWS ECS platform for production system
- Led the migration to a Docker-based development stack which allowed new developers to get set up and productive within minutes
- Implemented a payment service based on `servant`, allowing customers to automatically bill clients which currently processes over $1M/day. Built as a microservice using separate EC2 instances and RDS, completely isolated from main web application.
- Devised and built a full logging system using `Fluentd`

Intertrust, Inc. (Sunnyvale, CA)
Senior Software Engineer (11/13 – 6/14)

- Moved engineering organization from individual/localized developer environments to a single Vagrant system provisioned with Ansible, drastically reducing time developers spend setting up systems
- Developed and led Git branching strategy, eliminating previous code freezes during release cycles
- Instigated and wrote foundation code for new unit-testing methodologies using py.test and Mock
- Developed and write building blocks for Chef to produce a common set of configuration management recipes across different AWS environments and the development VM (Vagrant)
- Work on all aspects of the Django server code, which services the kabuto.com single page application and various mobile apps

Eventbrite, Inc. (San Francisco, CA)
Senior Software Engineer (11/09 – 11/13)

- Helped to design and build a horizontally scalable, Hadoop-based recommendation system using Eventbrite's social graph and Facebook connections. Java MapReduce jobs built custom recommendations for every individual based on prior event attendance. Patent US13408776 pending.
- Contributed to next-generation analytic systems for event organizers using Java MapReduce jobs to pre-calculate materialized views of data, which previously was being served from under-performing SQL queries
- Conceptualized and built "event cache", a constantly updating data store with up-to-the-second denormalized data for Eventbrite's live events, using pluggable storage backends (Redis or MongoDB)
- Initiated and designed platform for next generation RESTful API utilizing Django Rest Framework and a service oriented architecture, completely decoupling the API layer from the Eventbrite service layer
- Started and led initial move from Eventbrite's custom web stack to new Django codebase, backporting existing database models, login cookies and other components ensuring new and old pages worked side-by-side.

RoastLog, LLC
Founder and CEO (4/09 – present)

- Conceptualized and built RoastLog, a software and hardware system for coffee roasters to record and manage coffee roasting data and green bean inventory
- Work with hired contractor to design and build a custom hardware device which digitizes temperature readings from thermocouples and communicates via serial or Bluetooth connections
- Lead the strategic and technical vision of company, which consists of myself and a co-founder whom I recruited
- RoastLog currently has over 50 paying customers across four continents and won Best New Product at the Specialty Coffee Association of America's annual conference in 2010.

Nominum, Inc. (Redwood City, CA)
Senior Software Engineer (03/08 – 10/09)

- Developed and defined features for a Django-based centralized web administration product, EAC (Engineering Administration Console)
- Designed an NX redirection opt-out module for EAC which acts as the central point of authority for customers' DNS servers
- Developed an implemented an auto archiving statistics collection module that gathers metrics from any connected Nominum engine which provided customers with custom charts in multiple formats.

IronPort Systems (a Cisco business unit) (San Bruno, CA)
Software Engineer, Anti-Spam Content Analysis (7/05 – 03/08)

- Implemented and contributed to the architecture of IronPort's automatic rule discovery system
- Developed new data structures and algorithms allowing rule discovery system to identify most frequent/effective patterns from millions of lesser occurring patterns in a matter of seconds, a performance gain of two orders of magnitude
- Data mined corpus of email messages to identify frequent patterns for use in new rule discovery algorithms
- Awarded a Cisco Individual Achievement award for successes in rule discovery system
- Designed a Proportional-Integral-Derivative sampling system for tools which rely on a steady flow of email, assuring these systems a given volume of mail over a given time period
- Designed and implemented new web user interface for the corpus, resulting in a dramatic speed up in the classification of mail due to workflow and display improvements

eBay, Inc. (San Jose, CA)
Quality Assurance Engineer, eBay API (2/01 – 6/02) and (6/03 – 7/04)

- Collaborated in the design and implementation of a Java test automation harness
- Designed and wrote test harness' API which was used from Jython by QA Engineers
- Tested the eBay API through manual and automated processes in support of each public release
- Developed Python scripts to automate feature test cases as well as load and performance testing
- Wrote test plans, documented bugs and aided technical writers to support 3rd-party developers (customers)

GO.com (Sunnyvale, CA)
QA Engineer (3/00 – 2/01)

- Wrote Perl and Python scripts to find, identify, and remove low quality pages (spam) in the searchable web index to ensure a high quality of search results
- Responsible for the quality of the web index (250,000 pages) during each index refresh

Publications

Zambrano, B. (To be published, 2018) "Serverless Design Patterns and Best Practices" Packt Publishing

Education

B.S. in Computer Science
San Francisco State University
San Francisco, CA
May 2005

B.S. in Materials Engineering
California Polytechnic State University
San Luis Obispo, CA
June 1997

Educational Experience

San Francisco State University (San Francisco, CA)
Lecturer, Python Programming (Spring 2008) (2/08 – 5/08)
San Francisco State University (San Francisco, CA)
Research Assistant, NetBEAMS project (2/05 – 7/05)
San Francisco State University (San Francisco, CA)
Lecturer, Intro C++ Lab (2/05 – 5/05)