

# 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 strong attention to detail, excellent verbal and written skills, and am driven to produce powerful, 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 systems.

My recent focus is building microservices with Docker on top of Amazon Web Services.

## Technical Skills

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

## Professional Experience

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### **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 resulted in significant increase in revenue for Clearcare
- 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 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)

- 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.
- Designed and built a horizontally scalable, real-time/dynamic recommendation system based on MongoDB, using Eventbrite's social graph and Facebook connections; work presented at MongoSV: <http://bit.ly/bz-recos-slides> and SF MongoDB Meetup: <http://bit.ly/BZMDBMeetup>
- Led transition from Subversion to Git, designing and training engineering team on branching, merging and release strategy
- 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
- 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)
- Built an engineering documentation system using Sphinx, Git and Nginx

**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 and 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

## Education

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**B.S. in Computer Science**

San Francisco State University

May 2005

San Francisco, CA

**B.S. in Materials Engineering**

California Polytechnic State University

June 1997

San Luis Obispo, CA

## Educational Experience

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**San Francisco State University** (San Francisco, CA)

*Lecturer, Python Programming (Spring 2008) (2/08 – 5/08)*

- Develop brand new course curriculum, examples and projects for introductory Python course
- Lecture, assign lab work and assist students with lab assignments

**San Francisco State University** (San Francisco, CA)

*Research Assistant, NetBEAMS project (2/05 – 7/05)*

- Wrote J2ME data acquisition software using Agilent's JDDAC libraries to communicate with ocean water sensor and upload real-time measurements to sensor server
- Designed serial I/O libraries for communication between mobile phone and water sensor

**San Francisco State University** (San Francisco, CA)

*Lecturer, Intro C++ Lab (2/05 – 5/05)*

- Designed course curriculum for a hands-on introductory C++ programming lab
- Lectured, assigned lab work and assisted students with assignments