

Empirical Pythonista Seeking to Create Disruptive Technologies  
(SDN, Distributed Computation, Cryptocurrencies, Distributed Storage, Privacy)

---

## Contact Me, Josh Wilcox:

Email: [wilcoxjg@gmail.com](mailto:wilcoxjg@gmail.com)

Cell: 303-917-4176

Latest Version of This Resume: [https://github.com/zancas/resume/blob/master/za\\_resume.rst](https://github.com/zancas/resume/blob/master/za_resume.rst)

---

## Skills:

### Experienced:

- software engineering: Python, test-driven development, git, Unix security and privacy tools, Tahoe-LAFS, bash
- biology: genetics, evolution

### Proficient:

- JavaScript, C, crypto primitive applications (Diffie-Helman, signing, encrypting, etc.)
- probability, statistics, modeling, asymptotic algorithm analysis big-and-little-O

## Professional Experience:

### Least Authority (2011-2014):

Software Engineer, Operator, Customer Support

#### ***Developed features in support of the Simple Secure Storage Service (S4):***

- Independently designed, implemented, and tested integration with Stripe payment processing system. (Twisted Web Python, JavaScript)
- Integrated S4 nodes into the Statmover monitoring service. (Python, bash, AWS EC2/S3)
- Automated PGP signup flow (Python, bash, Unittest, GPG)
- Automated service provisioning including: payment processing, EC2 launch and Tahoe provisioning. (Twisted Python, git, tahoe-LAFS)
- Identified inadequacy of previous system for snapshotted deployments, designed and implemented Git based snapshotted provisioning. (git)

#### ***Operated EC2 clusters***

- Designed implemented and deployed customer EC2s (AWS EC2, Python, apt)
- Instrumented customer nodes to support foolscap gatherer and Statmover monitoring; configured and deployed foolscap gatherer monitors. (Python, foolscap, statmover, nagios)

- Maintained, extended and deployed Python Twisted webserver and Foolsmap application server. (Twisted Python, foolscap)
- Testing (twisted.trial.unittest, mock, etc.)
  - website
  - service provisioning
  - email

***Provided technical support to customers:***

- Responsible for responding to and resolving all customer requests in a timely manner using the zendesk issue tracking system

**University of California Santa Cruz (2007-2011):**

Researcher, Teacher's Assistant: Genetics, Bioinformatics, Statistics

***Bioinformatics:***

- Wrote python scripts to align molecular sequences and infer phylogenies from them.
- Used support vector machines to detect open reading frames in large yeast data sets

***Molecular Biology:***

- Molecular cloning to identify molecular signals controlling neural development.
- Used custom java applications to analyze retinal neuron firing patterns and infer properties of mammalian visual processing.

**Institute for Behavioral Genetics (2005-2007):**

- Used various statistical/clustering techniques eg MCMC and HMMs to detect confounding factors in large scale genetic association studies of molecular neural markers of addiction.
- Managed all types of lab data
- Wrote Python scripts automating data generation and analysis

**University of Colorado (CU) Boulder, Undergraduate Research Grants:**

***Molecular Cellular and Developmental Biology (2002-2005):***

- Wrote custom Python scripts to identify distinct clusters of microbial communities in the environment, resulting in peer reviewed publication (<http://aem.asm.org/content/72/5/3685.full>) and honors graduation.

***Environmental Population and Organismic Biology (2000-2002):***

- Performed electro-physiological experiments on zebrafish to determine how signal integration led to left-right decisions in various stimulus regimes

***Sergeant, United State Marine Corps (USMC) (1995-1999):***

- performed duties of Infantryman, Honor Guard, Intelligence Analyst and Squad Leader

## Education:

- Fruita Monument Highschool (1995)
- University of Colorado, Boulder (1999-2005)
  - B.A. Molecular Biology, Magna Cum Laude, (GPA: 3.95)
  - B.A. Biochemistry
  - Minors- Applied Math(statistics), Chemistry
  - Certificates: Neuroscience
  - Emphasis: Computer Science
- University of California Santa Cruz (2007-2011)
  - Molecular Biology; Bioinformatics; Statistics (Nominated TA of the Year 2010)
- Miguel De Cervantes Spanish School, Xela, Guatemala (2011)

## URLs to Interesting Bits of Code I've Written:

### For Leastauthority.com:

- [Storage Server \(EC2\) Deployments](#) (twisted)
- [Jasmine/JS Testing](#) and [Interface to Stripe Payment System](#) (jasmine, jquery, JS)
- [handling of Stripe, browser, and server interactions](#) (twisted.web)

### For Tahoe-LAFS:

- [update and refactor metadata handling](#) and [tests of metadata handling](#) (DRYness, unittest, mock)

### For OKTurtles:

- [perform lookups on namecoin servers](#) (in progress)