Empirical Pythonista Seeking Involvement With Radical Technologies

(SDN, Distributed Computation, Cryptocurrencies, Distributed Storage, Privacy)

Contact Me:

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Latest Version of This Resume: https://github.com/zancas/resume/blob/master/za_resume.rst

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Skills:

Experienced:

- Python Testing (twisted.trial, mock, unittest, doctest), Python (twisted.web, twisted.python.filepath, ipython, virtualenv, pip, matplotlib, biopython, etc...), Git, Unix privacy tools: GPG, OTR, SSH, etc..., Tahoe-LAFS, bash, networking (DHCP, DNS, HTTP, SSL, TCP/UDP, IP, ICMP, ethernet, 802.11, CDMA, QAM 16/64, Coding Schemes (Huffman), Information Limits, etc.), emacs

- Genetics (classical, quantitative, population/evolutionary), Evolution (molecular, theoretical)

Proficient:

- JavaScript (jasmine, jquery, Stripe client), C, vi/vim, many basic utilities (grep, ls, sl, find, nc, cat, etc, etc...), crypto primitives applications (Diffie-Helman, signing, encrypting, decrypting, etc.)

- probability (permutations, combinations, distributions (binomial, gaussian, exponential, Poisson, hypergeometric, etc.)), statistics (frequentist, Bayesian, coherency, consistency, minimality, sufficiency, etc. linear modeling, continuous, discrete, order stats, descriptive, predicitive, hypothesis testing), modeling (functional, discrete), asymptotic algorithm analysis big-and-little-O

Dabbled:

- Java, CSS, HTML, Nagios, piwik, scaPY, scheme, elisp, R, Machine Learning (MCMC/HMMs/Support Vectors)

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)
- Detected and demonstrated inadequacy of DARCS for snapshotted deployments. (darcs, git)
- 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 Foolscap 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)