

# Michael Altfield

<https://www.michaelaltfield.net>

## Summary of Qualifications

Linux enthusiast with 15 years of work experience. Broad range of technical skills with proficiency in several languages. Dedicated, hard worker with outstanding problem solving skills and a passion for security.

## EDUCATION

### University of Central Florida

Bachelors of Computer Science  
Minor: Secure Computing and Networking

Orlando, FL  
Graduated: April 2013

## TECHNICAL EXPERIENCE

### Operating Systems

- Extensive experience: Red Hat/Cent OS, Debian/Ubuntu, Qubes, Gentoo, Windows, OS X, Knoppix, Arch, IPCop, SmoothWall
- Moderate experience: Backtrack/Kali, TAILS, Whonix, (Open) Solaris, BSD, Fedora, DSL, Puppy, Windows Server 2003

### Programming/Design

- Extensive experience: Python, PHP, C, MySQL, PostgreSQL, Perl, Java, BASH, JS, XHTML, CSS, XML, Xpath
- Moderate experience: C++, Ruby, Awk, Sed, Tcl/Expect, ASP, MSSQL, Oz, VB

### Enterprise Software Administration

- Extensive experience: Chef, Terraform, Packer, Puppet, Ansible, Splunk, Right Scale, Xen, Wordpress, Apache, Nginx, GitLab CI/CD, GitHub Actions, GitHub Pages
- Moderate experience: Lighttpd, Varnish, Sphinx, Membase (Couchbase), Open Stack, F5 LBs, LXC, VMware ESX, Foglight, Sitescope, Active Directory, Snort, Nagios, Mediawiki, Big Brother/Hobbit, mod\_pagespeed

### Cloud

- AWS ec2, s3, Cloud Formation, IAM, ELB/ALB, EBS, EFS, Lambda, DynamoDB, CloudWatch, Spot Fleets

### Security

- GPG, SSL/TLS, OSCP, HPKP, HSTS, Let's Encrypt, SSH, TOR, FIM, (H)IDS, IPS, Nessus, nmap, iptables, PCAP (tcpdump/wireshark), OSSEC/Wazuh, auditd, SELinux, LUKS, Veracrypt, mod\_security

### Other Familiar Technologies

- Android, Bitcoin, LDAP, SNMP, SMTP, NFS, CIFS, ARP, cURL, cron, FTP(S), SFTP, VLAN, GIMP, Kdenlive, i18n, gettext, reST, FFmpeg, vi >> emacs

### API Experience

- Facebook Graph, F5's iControl, RightScale, Google Local, reCAPTCHA, Mobypicture

### Standards Experience

- W3C (X)HTML & CSS, PCI DSS

## RELEVANT EXPERIENCE

### Senior Lead, SysOps Engineering

Finoa GmbH

Berlin, Germany

November 2020 - Present

- First SysAdmin FTE (startup). Built & Managed SysAdmin and Release Eng teams from 0 to 7 FTEs.
- Assessed security, modeled threats for systems with >\$1 billion of cryptocurrency asset private keys
- Streamlined releases, stabilized blockchain infrastructure in public and private clouds (aws, proxmox)

### Founder

BusKill, Open Source Project

<https://buskill.in>

January 2020 - Present

- Invented laptop hardware kill cords. Featured in ZDNet, Forbes, PCMag, Bleeping Computer, etc
- CI pipelines (GitHub Actions) for cross-platform GUI (python, kivy) w/ reproducible builds
- Continuous Documentation: GitHub Pages, Sphinx, and Read The Docs theme on <https://docs.buskill.in>

### Founder

CoViz, Open Source Project

<https://coiz.org>

April 2020 - Present

- Modeling COVID-19 data to determine projected future spread of the virus on <https://coviz.org>
- CI/CD pipelines (GitLab) for plotly/pelican (python) static site w/ cloudflare cache and CDN

### Senior System Administrator

Open Source Ecology

June 2017 - April 2020

- Migrated & Consolidated 6 distinct websites from shared hosting to dedicated hosting
- Re-architected Web Infrastructure to include Let's Encrypt https certs using nginx and varnish cache
- Designed clientside encrypted backup solution with offsite cloud storage on Backblaze B2
- Installed and configured phplist server for GDPR-compliant, open-source mailing list. Contributed documentation and code to the phplist project

### IT

Democracy Now!

New York, NY

July 2017 - December 2017

- Trained producers & staff how to use PGP and organized the first-ever DN! PGP Key Signing Party
- Provisioned HIDS & FIM solution with PCI-aware, OSSEC-fork Wazuh for private Ganeti (Xen) cloud
- Scripted daily checksum file uploads for daily media content & corruption checks in nagios
- Restored data from corrupt bacula database for archived audio/video content on tape
- Various other IT-related tasks and projects

### Software Engineer

Zynga

San Francisco, CA

June 2013 - April 2017

- Helped maintain an extremely large scale environment of >10,000 RHEL nodes, supporting Zynga game studios' dev ops teams for facebook and mobile platforms
- Architected 3-tier ([1] Reserved [2] On-demand [3] Spot Fleet) Instances for high-availability web nodes clusters that leverage 60-90% discounted AWS Spot Instances
- Spent 4 months in Bangalore office leading game team migration from private datacenter to AWS EC2
- Lead Studio migrations between various technologies, including RightScale/terraform, Chef, S3/Swift
- Independently designed/wrote python scripts to automate mass changes to 1000s of nodes in Right Scale
- Worked on-call as Tier 3 support for SREs with escalated issues

## **Linux Sysadmin Internship**

Datalex

Alpharetta, GA  
May 2008 – May 2013

- Researched and developed POCs comparing various software solutions (Tripwire, OSSEC, Samhain, etc) to achieve PCI DSS compliance for User/Process Accounting, FIM (File Integrity Monitoring), Change Control, HIDS (Host-based Intrusion Detection), and Incident Response
- Designed/wrote software (both scripts and large projects) as needed for automated, administrative tasks
- Designed/wrote one-to-many automatic deployment system of Datalex software for quick, automated installation & configuration of version-controlled release candidates with transactional (rollback) functionality
- Designed/developed complex Puppet POC for all RHEL environments (~300 prod & pre-prod servers)
- Designed/wrote perl/python automation scripts for Citrix XenServer API and F5's iControl API
- Designed and wrote perl scrapers to simulate malicious data scrapings
- Helped maintain numerous production servers (mostly RHEL on Dell)

## **IT Internship**

City of Kennesaw - IT Department

Kennesaw, GA  
June 2006 - March 2008

- Designed and wrote databases/software as needed for internal customers (PHP, MySQL, BASH, JS, ASP)
- Helped maintain high-availability government servers running Windows Server 2003, Solaris, and Linux
- Helped physically rack servers and run cables when upgrading from server closet to proper data center

## **RELEVANT FREELANCE EXPERIENCE**

### **Technology Blog**

Freelance

Kennesaw, GA  
August 2007 - Present

- Maintains technology blog <https://tech.michaelaltfield.net> with posts such as: [Howto Guide: Whole House VPN...](#) (2017-08), [HPKP Best Practices for Let's Encrypt](#) (2017-09), [Tor -> VPN in TAILS to bypass tor-blocking](#) (2015-05), [Browsing without being tracked via Fingerprinting](#) (2012-10)
- Other content: Puppet, OpenSolaris ZFS JBOD DIY, GPG, linux, unix, firewalls, VPN, Xen, & IPv6

### **Webmaster**

Freelance

Kennesaw, GA  
September 2005 - February 2017

- Created/maintained kmhssoccer.org using PHP, MySQL, HTML, CSS, and JS meeting W3C standards
- Created/maintained knightswiki.org, the unofficial University of Central Florida Wiki

## **EXTRACURRICULAR ACTIVITIES**

### **Cross Country Bicycle Tours**

Freelance

Georgia to California (Summer of 2010)

Maine to Washington (Summer of 2011)

- Rode my bicycle ~4,000 miles from Savannah, Georgia to San Francisco, California
- Rode my bicycle ~4,295 miles from Bar Harbor, Maine to Seattle, Washington
- Raised \$4,900 for non-profit organization Bike the US for MS. Proceeds went to Multiple Sclerosis research & treatment.
- Blogged on [1guy2biketrips.michaelaltfield.net](http://1guy2biketrips.michaelaltfield.net)