

## QUALIFICATIONS SUMMARY

**Preferred Languages:** Python, Perl, Bash, JavaScript, PHP

**Tools:** AWS (Control Tower, CloudFormation, Organizations, Lambda, CodePipeline, Transit Gateway, EC2, S3, VPC, IAM, RDS, CloudWatch), Docker, Kubernetes, Ansible, Vagrant, Git, Apache

**Operating Systems:** Linux (RedHat, Ubuntu), Mac OS, Windows Server

**Databases:** MySQL/MariaDB, OpenLDAP, Oracle Directory Server Enterprise Ed.

**Special Hardware/Software:** Arduino, Ableton Live (audio), Max/MSP/Jitter (audio/video), sensors and interactive devices.

## EDUCATION

**University of Virginia:** Ph.D., Composition and Computer Technologies, 2004 - 2010

**Stanford University:** Visiting Researcher, 2002 - 2003

**Dartmouth College:** M.A., Computer Music, 1999

**University of Florida:** B.A., English, 1997 (Magna Cum Laude)

## WORK EXPERIENCE

*University of Virginia (7/13 – present)*

*Title: Sr. Cloud Infrastructure Engineer*

*Charlottesville, VA*

*[www.virginia.edu](http://www.virginia.edu)*

Current project: Developing a multi-account environment for provisioning new AWS accounts and services for internal customers requiring compliance regimens (NIST800-171, HIPAA, etc.). Accounts are provisioned via automation under an AWS Organization with access to shared services such as Active Directory, VPN, and shared AMIs. Account lifecycle events trigger pipelines and Lambdas to provision resources and access to shared services upon account creation. Centralized logging and audit accounts used for security monitoring and compliance enforcement at both the service and instance levels.

Created Ansible roles – tested with Molecule through Gitlab-CI – to deploy AWS CloudWatch Agent to Packer-driven AMI builds. Instances are deployed in a multi-account setup, but need to send logs to CloudWatch in a management account. Agents self-configure with correct cross-account settings at launch through a combination of Bash and JQ parsing of AWS of metadata.

Migrated and containerized (Docker) several key legacy services to minimize hardware failure risk and increase service reliability. Legacy services did not have development or test instances, so containerization delivered significant benefits on this front.

Subject matter expert and primary service owner for numerous critical enterprise-wide services including university-wide LDAP service, high security VPN LDAP authorization system, email alias management system, and central MySQL database cluster

*Teachstone Training, LLC (5/11 – 3/13)*

*Title: Sr. Web Developer*

*Charlottesville, VA*

*www.teachstone.com*

Instrumental in conversion of Teachstone's bloated PHP legacy systems to streamlined, test-driven Ruby on Rails. Worked with development team using Scrum/Agile methodology to gather requirements, create user stories, and demonstrate progress during bi-weekly sprints.

Maintained, rewrote, and refactored Teachstone's significant legacy PHP codebase and MySQL database.

***[Ph.D. work at University of Virginia, 2004 – 2010. See Education section above]***

*Vindicia, Inc. (1/04 – 7/04)*

*Title: Software Engineer*

*San Mateo, CA*

*www.vindicia.com*

Implemented a scalable OpenLDAP-based authorization system to control internal and external access to Vindicia's servers. LDAP database was synchronized with a central PostgreSQL database.

Designed an automated system that parsed daily data feeds from clients, analyzed them, and converted them to human-readable formats.

*The Betty Mills Company (6/02 – 1/04)*

*Title: Software Development Manager*

*San Mateo, CA*

*www.bettymills.com*

Sole technical lead and system administrator. Responsibilities included: full stack back and front-end development of retail website, maintenance and backup of Linux-based production webserver, system administration, sales and customer management features for live and internal sites.

*Cogneo (3/02 – 6/02)*

*Title: Web Applications Engineer (contract)*

*San Mateo, CA*

Wrote and integrated OO Perl applications using the Mason templating library.

*Zack Systems (9/99 – 8/01)*  
*Title: Senior Software Engineer*  
*San Mateo, CA*

Used OO Perl, CGI, MySQL, Javascript and HTML to create a shared browsing and chat application, allowing multiple users to surf the web together via a linked browsing mechanism.

## RECENT TRAININGS

DevOps on AWS. Global Knowledge. Arlington, VA. Nov, 2019.  
Docker for Developers. DockerCon. San Francisco, CA. June, 2018.  
SysOps on AWS. Amazon Web Services. Reston, VA. Jan, 2017.

## BOARDS

President, Westminster Child Care Center, Board of Directors. 2016 – 2017.  
Vice President, Westminster Child Care Center, Board of Directors. 2013 – 2016.  
Member, Piedmont Council for the Arts, 2030 Advisory Board. 2015 – 2017.

## HONORS, AWARDS, FELLOWSHIPS, AND GRANTS

University of Virginia Arts Council Grant, 2014  
Turbulence.org/National Endowment for the Arts new work commission, 2012  
Graduate School of Arts and Sciences Dissertation Year Fellowship, 2009 - 2010  
Double Hoo Grant from the University of Virginia, 2010  
University of Virginia Award for Excellence in Scholarship, 2008  
Jefferson Fellow at the University of Virginia, 2004 – 2008  
National Merit Scholar, 1993 – 1997

## SELECTED WORKS AND PRESS

*“WoodEar: Exploring the Feelings of Trees.”* Radio segment produced by Sandy Hausman for RadiolQ  
Broadcast on WVTF, May 1<sup>st</sup>, 2014

<http://wvtf.org/post/wood-ear-exploring-feelings-trees#stream/0>

*WoodEar* (2012 – 2014). An audio-visual installation for tree and network.

Commissioned in 2012 by Turbulence.org with funds from the National Endowment for the Arts.  
2014 Ruffin Gallery installation funded by with a University of Virginia Arts Council Grant.

<https://vimeo.com/137656668>

*ItSpace (gallery version)* (2011). A live physical installation based on the online *ItSpace* project.

Pixilerations Festival, Providence, RI, September 22 – October 2, 2011.

Art Gallery at SIGGRAPH 2011, Vancouver, B.C., August 7 – 11, 2011.

*“Objects Sing at ItSpace.”* Radio segment produced by Jesse Dukes for Hearing Voices.

Broadcast on National Public Radio’s “Day to Day”, February 25<sup>th</sup>, 2008.

<http://www.npr.org/templates/story/story.php?storyId=19338285>