

Harrison Totty

DEVOPS ENGINEER · SOFTWARE PROGRAMMER

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Summary

Current lead DevOps Engineer and systems architect for the Web Systems group at Wolfram Research. Highly experienced at implementing custom infrastructure solutions within bare-metal/on-premise environments. Thrives in seeking solutions within domains not yet encompassed by popular technologies or industry standards.




Work Experience

Wolfram Research, Inc.

Champaign, IL


DEVOPS ENGINEER

Apr 2018 - Present

- Streamlined disaster recovery of Wolfram Cloud user data with end-to-end encrypted backups via  BackupUtil.
- Provisioned bare-metal Kubernetes environments for Wolfram|Alpha utilizing Kubespray, Helm, Rook-Ceph, and Velero.
- Incorporated Hashicorp Vault for secrets management of Kubernetes CI/CD pipelines.
- Implemented infrastructure as code (IaC) standards for on-premises environments by leveraging  Puppet and  Cobbler.

WEB SYSTEMS ADMINISTRATOR

Dec 2016 - Apr 2018

- Developed a  templating engine for Apache HTTP Server configurations.
- Provisioned and maintained on-premises environments for Wolfram Cloud.
- Collaborated custom log data analysis and reports for Wolfram Cloud in Python and Mathematica.
- Designed Salt configurations for managing internal infrastructure.
- Developed backend code for the Wolfram Cloud Platform in Java.

WEB SYSTEMS INTERN

Sep 2016 - Dec 2016

- Implemented new Wolfram kernel features in C/C++.
- Developed a containerized RPM build environment hosted in Apache Marathon/Mesos.

Tallahassee Community College

Tallahassee, FL

MATHEMATICS AND TECHNOLOGY TUTOR

May 2016 - Aug 2016

- Provided tutoring and support to students in various mathematics and technology topics.

University of West Florida

Pensacola, FL

STUDENT SSE SYSTEM ADMINISTRATOR

Jan 2014 - Aug 2014

- Provided general systems administration for the faculty of the School of Science and Engineering.

RESNET TECHNICIAN

Feb 2012 - Aug 2013

- Supported the technical needs of dorm students.

Skills

Containers & Orchestration

Docker, Helm, Bare-Metal Kubernetes (k8s & k3s)

Data Languages

CSV/TSV, INI, JSON/YAML, TOML, XML

Data Science

Jupyter Lab/Notebooks, Mathematica, matplotlib, plotly, sympy

IDEs & Text Editors

GitHub Atom, GNU Emacs, nano, Sublime Text, vi/vim, Visual Studio (Code)

Infrastructure Management

Ansible, Cobbler, Puppet, Salt, Hashicorp Vault, Velero

LAMP Components

Apache HTTP Server, HAProxy, keepalived, MySQL (Percona XtraDB Cluster), NGINX, Apache Tomcat

Markup Languages

TeX, Markdown, Org

Networking Fundamentals

ARP, CIDR, Mikrotik RouterOS, TCP/IP & OSI Model, Ubiquiti Unify Controller, VLAN

Operating Systems

Alpine Linux, Arch Linux, Debian (Ubuntu), Gentoo, RHEL (CentOS), Void Linux, Microsoft Windows

Programming Languages

C/C++, C# .NET, Emacs Lisp, groovy, Perl, Python, Rust, Shell Languages

Software Engineering

Bitbucket, git, GitHub, GitLab, Jenkins, JIRA

Systems Administration

chronyd/ntpd, DNS (BIND/Unbound), init (SysVinit/systemd), OpenLDAP, postfix, rsyslog, SSSD, ulimits

Templating Languages

Cheetah, Embedded Ruby, Jinja, Liquid

Education

Tallahassee Community College

Tallahassee, FL

ASSOCIATE OF SCIENCE

Jan 2015 - Jan 2016

- Graduated honors with 4.0 GPA.