

# Harrison Totty

SENIOR DEVOPS ENGINEER · SOFTWARE PROGRAMMER

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## Summary

Current Senior DevOps Engineer within the Production Operations group at Centro. Highly experienced at implementing custom infrastructure solutions within both cloud and on-premises environments. Thrives in seeking solutions within domains not yet encompassed by popular technologies or industry standards.

## Work Experience

### Centro, Inc.

SENIOR DEVOPS ENGINEER

Remote

Feb 2021 - Present




- Developed custom operators to simplify deployment of Basis platform environments into Kubernetes.
- Wrote terraform code for managing infrastructure hosted in AWS.
- Implemented serverless data pipelines using AWS Lambda & Step Functions.

### Wolfram Research, Inc.

DEVOPS ENGINEER


Champaign, IL

Apr 2018 - Feb 2021

- 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.
- 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

MATHEMATICS AND TECHNOLOGY TUTOR

Tallahassee, FL

May 2016 - Aug 2016

- Provided tutoring in topics such as Ordinary Differential Equations and introductory programming courses.

## Skills

<b>Amazon Web Services</b>	ALB/ELB, Cloud Formation, EC2, EKS, IAM, Lambda, RDS, Step Functions, Secrets Manager
<b>Containers &amp; Orchestration</b>	Docker, Helm, Kubernetes (managed & unmanaged)
<b>Data Languages</b>	CSV/TSV, INI, JSON/YAML, TOML, XML
<b>Data Science</b>	Jupyter Lab/Notebooks, Mathematica, matplotlib, plotly, sympy
<b>IDEs &amp; Text Editors</b>	GitHub Atom, GNU Emacs, nano, Sublime Text, vi/vim, Visual Studio (Code)
<b>Infrastructure Management</b>	Ansible, Cobbler, Puppet, Saltstack, Hashicorp Terraform, Hashicorp Vault, Velero
<b>LAMP Components</b>	Apache HTTP Server, HAProxy, keepalived, MySQL (Percona XtraDB Cluster), NGINX, Apache Tomcat
<b>Markup Languages</b>	TeX, Markdown, Org
<b>Networking Fundamentals</b>	ARP, CIDR, Mikrotik RouterOS, TCP/IP & OSI Model, Ubiquity Unify Controller, VLAN
<b>Operating Systems</b>	Alpine Linux, Arch Linux, Debian (Ubuntu), Gentoo, RHEL (CentOS), Void Linux, Microsoft Windows
<b>Programming Languages</b>	C/C++, C# .NET, Emacs Lisp, groovy, Perl, Python, Rust, Shell Languages
<b>Software Engineering</b>	Bitbucket, git, GitHub, GitLab, Jenkins, JIRA
<b>Systems Administration</b>	chronyd/ntpd, DNS (BIND/Unbound), init (SysVinit/systemd), OpenLDAP, postfix, rsyslog, SSSD, ulimits
<b>Templating Languages</b>	Cheetah, Embedded Ruby, Jinja, Liquid

## Education

### Tallahassee Community College

ASSOCIATE OF SCIENCE

Tallahassee, FL

Jan 2015 - Jan 2016

- Graduated honors with 4.0 GPA.