

# Harrison G. Totty

DEVOPS ENGINEER · SOFTWARE PROGRAMMER

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## Education

### Tallahassee Community College

ASSOCIATES OF SCIENCE

- Graduated honors with 4.0 GPA.

Tallahassee, FL

Jan 2015 - Jan 2016

### University of West Florida

PHYSICS

Pensacola, FL

Aug 2011 - Jul 2014

## Skills

<b>CI/CD</b>	Jenkins Pipelines (Declarative & Scripted Syntax)
<b>Configuration Management</b>	Ansible, Puppet, Salt
<b>Configuration/Data Languages</b>	JSON, TOML, YAML
<b>Container Runtimes &amp; Orchestration</b>	Docker, Helm, Kubernetes (k8s & k3s)
<b>Data Science</b>	Jupyter Lab/Notebooks, Mathematica, matplotlib, plotly, sympy
<b>GNU/Linux Distributions</b>	Arch Linux, Gentoo, Debian (Ubuntu), RHEL (CentOS), Void Linux
<b>High Availability</b>	HAProxy, keepalived
<b>Human Languages</b>	English (Native), German (Beginner)
<b>Markup Languages</b>	LaTeX, Markdown, Org
<b>Networking Fundamentals</b>	ARP, CIDR, Mikrotik RouterOS, TCP/IP & OSI Model, Ubiquiti Unify Controller, VLAN
<b>Programming Languages</b>	C/C++, C#, Emacs Lisp, Groovy, Perl, Python, Rust, Shell Languages, Wolfram (Mathematica)
<b>Project Management</b>	GitHub Issues/Projects, GitLab Issues, JIRA
<b>Repository Hosting</b>	Bitbucket, GitHub, GitLab
<b>Secrets Management</b>	Hashicorp Vault
<b>Templating Languages</b>	Cheetah, Liquid, Jinja, Puppet (ERB)
<b>Text Editors</b>	GNU Emacs, Vim
<b>Version Control Systems</b>	cvs, git
<b>Web Servers</b>	Apache Tomcat, Apache Web Server

## Work Experience

### Wolfram Research, Inc.

DEVOPS ENGINEER

- Architected Kubernetes clusters and supporting deployment pipelines.
- Developed/Implemented configuration management and remote execution frameworks.
- Personally architected software platforms, individual servers, machine clusters, and deployment workflows.
- Provided routine performance and security analysis.

Champaign, IL

Apr 2018 - Present

WEB SYSTEMS ADMINISTRATOR

- Provided general systems administration for various Wolfram web products and services.
- Designed & built DEV/TEST environments for Wolfram Cloud.
- Developed backend code for the Wolfram Cloud Platform in Java.

Dec 2016 - Apr 2018

WEB SYSTEMS INTERN

- Developed systems utilities to aid common operations tasks.
- Implemented new Wolfram kernel features in C.
- Ported many internal components to containerized environments.

Sep 2016 - Dec 2016

### Tallahassee Community College

MATHEMATICS AND TECHNOLOGY TUTOR

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

Tallahassee, FL

May 2016 - Aug 2016

## Wolfram Research, Inc.

WOLFRAM SUMMER SCHOOL STUDENT

- Invited to Bentley University for three weeks to conduct research on various machine learning analogues.

Boston, MA

Jan 2013 - Feb 2013

## Radio Shack

SALES ASSOCIATE

- Provided customer service and support for a variety of mobile devices, DIY components, and more.

Pensacola, FL

Jul 2013 - Mar 2015

## University of West Florida

STUDENT SSE SYSTEM ADMINISTRATOR

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

Pensacola, FL

Jan 2014 - Aug 2014

RESNET TECHNICIAN

- Supported the technical needs of dorm students.

Feb 2012 - Aug 2013

# Projects

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## Personal Finance Analytics Platform

A PYTHON LIBRARY FOR CATEGORIZING AND ANALYZING BANK TRANSACTIONS

- Categorizes transactions based on a home-made library of regular expressions.
- Leverages sklearn to perform predictive regression on financial trends.
- Provides a wrapper around plotly for graphical analysis.

Personal Project

Mar 2020 -

## CV & Resume

(THIS DOCUMENT)

- Built from Jinja2-templated LaTeX documents via "tmpl".
- Raw data present in YAML format.

Personal Project

May 2019 -

## tmpl

A GENERAL-PURPOSE TEMPLATING SYSTEM

- A general-purpose Jinja2/YAML templating system based on "mkconf" and "mkdot".
- Utilized in the generation of this CV/Resume.
- Supports runtime-loaded Python extensions to the templating system.
- Capable of handling raw Jinja2 content piped directly to STDIN.

Personal Project

May 2019 - Jun 2019

## Remote Execution Framework

AN EASY REMOTE COMMAND EXECUTION UTILITY

- Written in Python3 as a lightweight alternative to frameworks such as Fabric and Ansible.
- Automatically formats output depending on whether a TTY is present.
- Capable of running both arbitrary commands and defined tasks.
- Includes interactive console mode.

Personal Project

Nov 2018 - Apr 2019

## mkdot

THE HANDY DOTFILE TEMPLATING SYSTEM

- Based on "mkconf" project, but specialized for the generation of dotfiles.

Personal Project

Oct 2018 - Dec 2018

## mkconf

AN APACHE WEB SERVER CONFIGURATION TEMPLATING ENGINE

- Generates Apache Web Server configurations from Jinja2 templates and YAML configuration files.
- Replaced older in-house utility written in Perl.
- Validates directives after generating configuration files.
- Capable of backing-up previous configurations and reverting changes.

Wolfram Research, Inc.

Aug 2018 - Sep 2018