Kate Miles
Systems Engineer

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SUMMARY

Information technology specialist with over ten years experience developing, supporting and maintaining complex IT infrastructure, software and operating systems. Background in high performance computing with noted expertise related to Linux/Unix, systems software development and storage solutions.

Full stack software development experience writing web applications in Java, Python, PHP, Perl. Systems software written in a variety of compiled languages and scripting. Experience in building custom solutions.

EXPERIENCE

Virginia Diodes, Charlottesville VA - *Software Developer*

July 2023 - current

- Led project to develop Java/Vaadin web app for business intelligence
- Python software used to test products we manufacture
- Controlling instruments (Spectrum analyzers, Vector network analyzers, etc) with GPIB
- Flask web app used to analyze and display test data
- Project to extract data from our billing system using REST API for evaluating time spent on manufacturing different parts

University of Virginia Research Computing, Charlottesville VA - *Systems Engineer*

October 2020 - June 2022

- Provided HPC services for hospital/academic research projects
- CentOS based HPC environment
- HIPAA compliant
- Openstack & Ansible for provisioning each research project with high security VMs
- Infiniband networking
- IBM Spectrumscale storage

University of Virginia Computer Science Dept, Charlottesville VA - *Systems Engineer*

MARCH 2017 - October 2020

- Responsible for mix of technologies in large datacenter
- Linux/Unix systems development

- High performance computing - SLURM, MPI, Distributed Computing
- Enterprise storage and backup
- 10 Year Service Award

NOTABLE PROJECTS:

- Developed web apps for internal use, account creations, host creation
- Created self service password reset web page using Shibboleth for authentication
- Wrote software for ZFS snapshotting and replication in Go doing interop with C libzfs
- Led initiative to modernize CS computing infrastructure
- Led migrations from Ubuntu to CentOS; CFengine to Puppet; WDS/PXElinux to Foreman;

DuPont Community Credit Union, Waynesboro VA - *Systems Engineer*

OCTOBER 2014 - MARCH 2017

- Web development
- Network infrastructure
- Core banking platform development
- Data analytics

NOTABLE PROJECTS:

- Wrote Java web app to run safe deposit box rentals through branches (still in production)
- Led project to implement biometric authentication for branch computer workstations
- Built solution for monthly ATM fee refunds for qualifying accounts
- Worked with large databases of financial transactions

University of Virginia, Charlottesville VA - *Internship > Systems Admin. > Systems Engineer*

JULY 2007 - OCTOBER 2014

- Help desk support
- Linux/Unix administration
- Windows Active Directory and NIS integration via LDAP
- Development of Linux operating systems
- Worked two years half time in CS, half time in Civil Engineering as their LSP

CORE QUALIFICATIONS

- Linux: RedHat, Debian
- Unix: Solaris, BSD, AIX
- Windows Server
- Active Directory: SSO
- SQL: MySQL, MSSQL, SQLite, MongoDB
- SCM: Git, GitLab
- Jack Henry Software: Epysis, PowerOn, SymExchange API

- Deployment: Puppet, Foreman, Ansible
- Storage: SAN, ZFS, NFS
- LibZFS
- Strong analytical skills
- Driven by passion for work
- Project management skills

Programming and Scripting Languages

Proficient

- D
- Go

- Bash/Shell
- Python

- Java
- PHP

Some Experience

- C
- Perl

- C++
- Julia

- C# & .NET

Open Source

Github: https://github.com/ktm5j

Gitlab: https://gitlab.com/ktm5j

EDUCATION

Radford College, Radford VA- *Computer Science Coursework*

AUGUST 2009 - MAY 2011

Two years of computer science undergrad coursework.

Piedmont Valley Community College, Charlottesville VA- *Computer Science Coursework*

AUGUST 2011 - MAY 2012

Two semesters of CS related classes.

Puppet Training, Washington DC - *Puppet Certification*

NOVEMBER 2017

Twenty one hours of Puppet training completed.

Symitar Educational Conference, San Diego CA - *Symitar/ARCU training and seminars*

September 2016

Educational conference for Credit Union specific IT solutions.

REFERENCES AVAILABLE UPON REQUEST