Charles Fyfe, Ph.D.

ch@rles.uno charles.uno 651-269-9245 Minneapolis

Summary

Ten years of experience with Python and distributed Linux systems. Emphasis on CI/CD tools such as Jenkins, Docker, and REST APIs. Consistent dedication to building a stronger team through mentorship and training. Looking for a position with room to grow.

Experience

Senior Systems/Software Engineer — *Hewlett Packard Enterprise, 2019–Present*

- Led development of a **Python**-based monitoring framework for HPE's Cray supercomputers. Automated failure detection for **Ansible**, **Kubernetes**, and hardware configuration. Published real-time updates on Slack via webhook, saving dozens of hours of triage daily.
- Designed and implemented an ecosystem of **Flask**/**WSGI** microservices to process **JSON** data via **REST API**. Interfaced with a **time series database** and an **AngularJS** dashboard to extract and present actionable metrics.
- Provisioned distributed resources via **Google Cloud** and **Terraform** for automated testing.
- Wrote **CI/CD pipelines** to build, test, and deploy RPMs and **Docker**-based services on commit in support of 100+ engineers. Crawled thousands of **Git** repos via Jenkins and BitBucket APIs to validate pipeline updates against live use cases.

Visiting Assistant Professor of Physics — *St. Olaf College, Fall 2020*

- Coached students in advanced problem solving techniques, including numerical modeling and data visualization in **Python**.
- Supervised a TA and two tutors as they provided students with additional support.

System Test Engineer — *Cray Inc., 2016–2019*

- Created a multithreaded **Python** package for access and analysis of system logs. Processed terabytes of text to diagnose hardware failures on a $70 million customer installation.
- Administered boots and upgrades on a 200-node **Linux** system in support of 20 engineers.
- Scraped, parsed, and analyzed boot data from thousands of nodes via **Python** and **shell scripts**. Identified performance regressions and correlated them with firmware updates.

Volunteer Powerlifting Coach — *Special Olympics Minnesota, 2018–2020*

- Adapted coaching strategies to each athlete's physical abilities and communication skills.

Research/Teaching Assistant — *University of Minnesota, 2009-2016*

- Automated parallel simulations and analyzed hundreds of gigabytes of data using **Python**.
- Instructed hundreds of college students on the fundamentals of data analysis.

Education

Ph.D. (Space Physics) — *University of Minnesota, 2016*

B.A. (Mathematics & Physics) — *St. Olaf College, 2009*