Charles Fyfe, Ph.D.

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Summary

Ten years of experience with Python and distributed Linux systems. Emphasis on DevOps tools such as Docker, Groovy, and REST APIs. Looking for opportunities in microservice development and Site Reliability Engineering.

Experience

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

- Built an ecosystem of **Python** and **Go** microservices for monitoring supercomputers. Detected failures in **Ansible**, **Kubernetes**, and hardware configuration. Cross-referenced build logs to identify product owners. Published real-time updates on Slack via **REST API**.
- Prioritized a **Scrum** backlog for a team of five engineers.
- Wrote **Groovy** 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.
- Provisioned distributed resources via **Google Cloud** and **Terraform** for automated testing.
- Aggregated build, test, and deployment data in **Elasticsearch**. Created an **AngularJS** dashboard to show metrics per developer, product owner, and VP 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*

- Scraped, parsed, and analyzed boot data from thousands of nodes via **Python** and **shell scripts**. Identified performance regressions and correlated them with firmware updates.
- Administered boots and upgrades on a 200-node **Linux** system in support of 20 engineers.
- Automated product testing using **Avocado** and **Pytest**. Organized testing workflows and outcomes in **TestRail** via **REST API**.

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*

- Optimized simulations in parallel **C++**. Analyzed hundreds of gigabytes of data in **Python**.
- Instructed hundreds of college students on the fundamentals of data analysis.

Education

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

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