Michael Dresser

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EXPERIENCE

GOOGLE | Software Engineering Intern
2020 | Remote

- Contributed to the Kubernetes project by designing and implementing an improved cluster deployer for GCE.
- The Kubernetes project runs 90,000 end-to-end tests a month on GCE. The new deployer simplified a convoluted end-to-end test workflow, improving the experience of test writers and testing infrastructure maintainers.
- Contributed patches to repositories across the Kubernetes project.

CU BOULDER COMPUTER SCIENCE | Graduate Student Staff
2019 | Boulder, CO

- Held office hours and did grading for Linux Systems Administration.
- Course material included bash scripting, logical volumes, configuration using Puppet, access control, manual and DHCP configuration of network interfaces, DNS server configuration, and firewall configuration using iptables.

TWILIO | Software Engineering Intern
2019 | Denver, CO

- Designed and laid out a development plan for a microservice to enable testing. Moved that service into Kubernetes. It was quickly in use by 3 teams and allowed one of them to automate flows they hadn't been able to for a year.
- Migrated legacy VM-based service into Kubernetes, saving up to an hour of developer time for every release.
- Created Go service and automatic pipeline to recover failed operations by recirculating Kafka messages.

LOGRHYTHM | Software Engineering Intern
2018 | Boulder, CO

- Developed addition to Go microservice to write over 50,000 logs/minute to GCP Pub/Sub.
- Developed Go microservice that queries Elasticsearch to prevent PII cross-contamination.

OVERWATCHID | Software Development Intern
2017 | Denver, CO

- Designed and implemented Java (Spring) service for integration with multiple ITSM products' APIs.

OTHER EXPERIENCE

CU CYBERSECURITY CLUB | Events Manager
2018-Present | Boulder, CO

- Planned and led weekly meetings for the club.
- Reworked meeting norms to be more interactive.
- Designed lesson plans to quickly get new members up to speed, regardless of prior experience.
- Competed in RMCCDC 2020, including creating Linux operations playbooks and daily plans for the team.

EDUCATION

UNIVERSITY OF COLORADO BOULDER
B.S. and M.S. in Computer Science
Expected Dec 2020
GPA: 4.0 / 4.0

SKILLS

LANGUAGES
Go • Python • Clojure • Scala • Java • C++ • C • JavaScript • Bash • SQL

TECHNOLOGIES
Linux • Kubernetes • Docker • Git • Microservices • GCP • AWS • REST • Spark • Kafka

COURSEWORK

GRADUATE
Algorithms
Programming Languages
Machine Learning
Linear Programming
Data Mining
Datacenter Scale Computing

UNDERGRADUATE
Operating Systems
Big Data Architecture
Linux Systems Administration

PROJECTS

TEEMO TOOL
Clojure, TypeScript, Python
IRC bot, API server, and website that gather and display information about the betting minigame on the Salty Teemo Twitch stream. Includes a crawler for the Riot Games API and Jupyter notebooks to analyze the gathered data.

THESIS: ARUGULA
Scala
Arugula is a probabilistic programming language that I designed and implemented for my thesis. It has special semantics that support delayed sampling of distributions combined with symbolic inference where possible, which improves the accuracy of estimators.