Zachary **Wieand**

Site Reliability Engineer · Software Engineer

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Skills

- **Tools:** Kubernetes · Helm · Docker · Terraform · Jenkins · GitHub Actions
- **Programming Languages:** Golang · Python · Bash
- **Platforms/Frameworks:** AWS · Gorilla Mux · FastAPI

Work Experience

ACV Auctions

Buffalo, NY

Senior Site Reliability Engineer, Tech Lead — *Jan 2022 - Present*

- Responsible for developing quarterly Objectives and Key Results and tracking performance metrics weekly.
- Added spot instances to our EKS clusters saving $20,000 on compute monthly.
- Simplified the deployment process by creating a set of Helm charts for common application types e.g. HTTP API, Kafka consumer, cronjob.
- Implemented SOX compliance checks into the CI/CD deployment process to enforce audit requirements and track release events.
- Created a set of shared Golang modules to encapsulate best practices e.g. structured logging, HTTP setup, application configuration.
- Developed a multi-agent pipeline architecture in Jenkins reducing PR pipeline latency by 60%.
- Lead the migration of the engineering observability and monitoring stack from NewRelic to Datadog.
- Encapsulated golden signal alert conditions into standard application Helm charts increasing ACV's monitoring coverage.

Site Reliability Engineer III, Tech Lead — *Oct 2020 - Jan 2022*

- Added over 1,500 new alerting rules to our Kubernetes clusters and RDS databases with Terraform.
- Migrated several AWS components such as EKS clusters, VPC/Networking, WAF, and Security Groups into Terraform modules.
- Lead a team to develop Helm chart linting and testing rules. Performs Kubernetes schema validation, dependency verification, and custom linting rules.
- Developed a system for Horizontal Pod Autoscaling, using Prometheus and KEDA, to scale on custom metrics.

Site Reliability Engineer II — *Apr 2019 - Oct 2020*

- Built and deployed a fluentd application to all Kubernetes clusters to parse and ship logs to Splunk and NewRelic.
- Stood up a staging environment for deployment and performance testing. Led to a 10x reduction in deployment failure rate.
- Built an on cluster change management database. Tracks the history of changes to various Kubernetes resources on cluster.
- Developed a template repository for FastAPI projects following best code and CI/CD practices. Enables teams to deploy to production in less than 15 minutes.
- Deployed an instance of Vault to replace Kubernetes Secrets and enable teams proper RBAC to manage sensitive content.

Lockheed Martin

Manassas, VA

Software Engineer Assosciate, International Submarine Programs — *Aug 2017 - Mar 2019*

- Created a Jenkins pipeline to provision a full virtual software development and runtime environments for Fedora Core 9 and RHEL7.4.
- Led the migration of software and operating system components from Fedora Core 9 to RHEL7.4 and from RHEL5.4 to RHEL7.4.
- Designed and implemented a data recording and playback system for future analysis of core sensor data.
- Migrated compile and development environments to containerized builds with Docker.
- Sped up the software deployment process by 30% using Ansible playbooks.
- Built a file parser to convert sigc++ API to boost signals. Saved team $60,000 of labor hours.

Google

Mountain View, CA

Software Engineer, Tools and Infrastructure Intern — *May 2016 - Aug 2016*

- Extended an iterative testing tool to include Java regression tests. Tool responsible for maintaining several infrastructure components which allowed engineers to run these tests 5x faster.
- Added in a test case filtering feature for even faster test run speeds.
- Fixed race conditions and other bugs to speed up the tool's release .

Engineering Practicum Intern — *May 2015 - Aug 2015*

- Implemented a shell script to automatically detect and repair missing test coverage for code review and submission of widely used libraries. Doubled test coverage for these libraries.
- Designed, implemented, and deployed a Java Map Reduce job to report and fix 7 types of data corruption.

Education

University at Buffalo

Buffalo, NY

B.S. in Computer Science · Minor in Mathematics — *Aug 2013 - May 2017*

- 3.9/4.0 GPA
- Dean's List 8 semesters