

Summary

I'm an experienced cloud engineer with interests in AWS, infrastructure as code, and distributed systems. I care about simplicity, automation, resiliency, and reliability. I enjoy automating processes to increase the efficiency of others.

Languages and Technologies

- Languages: Python, HCL, JavaScript/TypeScript, SQL
- Technologies: AWS, Terraform, Docker, k8s, Flask, Postgres, GitHub Actions, Jenkins
- Certifications: AWS Solutions Architect – Professional (and Associate)
- Other: 12-factor app and CI/CD principles, automated testing

Experience

Sabbatical

Nov 2023 – present

- Studying for AWS certs while taking care of my children part of the time
- Passed the *AWS Solutions Architect – Associate* exam
- Passed the *AWS Solutions Architect – Professional* exam

Senior DevOps Engineer

Dexian

Feb 2023 – Oct 2023

- Built a self-service automation platform in Python around GitHub and other tools
 - Replaced basic, buggy logging with structured logging
 - Refactored base http connections to use httpx instead of 3 different libraries
- Increased execution speed by 15-20% of Python built from source in base Docker images used by all Jenkins build agents
- Converted Docker health checks to Kubernetes liveness, readiness, startup probes

Sabbatical

Jun 2022 – Feb 2023

- Took time off to build projects with Python and AWS
- Created [project](#) showing how to run the latest versions of Python in AWS Lambda (which wasn't simple at the time)

Production Engineer

Very Good Security

May 2021 – May 2022

- Handled production issues with logs, metrics, and transferring multi-GB files with Airflow
- Wrote Python code to increase reliability of large file processing
- Migrated over 30 apps and services from unsupported k8s / EKS versions to latest
- Standardized Helm charts with annotations
- Used Terraform with Terragrunt to manage AWS resources
- Configured logging and metrics with fluentd / fluentbit and Grafana, Prometheus / Cortex
- Updated, tested and deployed over 20 Docker base images
- Closed over 40 open security tickets that had been backlogged for months, modified IAM roles

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|---|-------------------------------|----------------------------|
| Senior SRE | Lean TECHniques | <i>Jan 2021 – May 2021</i> |
| <ul style="list-style-type: none"> Responsible for monitoring and observability across distributed systems that process machine and agronomic data at John Deere ISG Set up Grafana and Prometheus metrics for Java / Scala services on Amazon ECS Taught 3 other team members how to use Terraform to manage AWS resources | | |
| Sr. Software Engineer | Lean TECHniques | <i>Feb 2019 – Dec 2020</i> |
| <ul style="list-style-type: none"> Worked on a distributed system for John Deere ISG that sends machine alerts and other notifications to dealers and customers worldwide Improved the admin UI so dealers could manage multiple machines and techs per customer Replaced a bunch of high-maintenance Python / Node.js scripts with Terraform Technologies: <div> AWS: SQS, SNS, S3, Kinesis, EC2, ECS / Fargate, Lambda, RDS / Aurora, Beanstalk</div> <div>App: Postgres, Scala, Java, and Node.js / TypeScript / React</div> <div>Monitoring: Cloudwatch, ELK stack</div> <div>CI/CD: GitHub, Jenkins, Drone.io, Docker, Terraform, CloudFormation, bash and Python</div> | | |
| Sr. Software Engineer | Granular | <i>Sep 2016 – Jan 2019</i> |
| <ul style="list-style-type: none"> Took the initiative to track down all unhandled exceptions in the nitrogen app backend. Triaged, prioritized, and helped fix them, for which I was recognized with an MVP cash award at the July 2018 all-hands meeting Built a feature flags SaaS app using Python, Flask, Terraform, Docker, Kubernetes, DynamoDB, and other AWS services. Distributed across multiple AWS regions, used by all Encirca apps Maintained and enhanced NSIM, a SaaS distributed system for running nitrogen simulations using AWS EC2 Spot Fleet, Lambda, Step Functions, CloudFormation, S3 | | |
| Sr. Software Developer | DuPont Pioneer | <i>2012 – 2016</i> |
| <ul style="list-style-type: none"> Developed tools to manage vast amounts of plant breeding data. Used Angular.js and the NPM toolchain, C#, ASP.Net Web API, and Entity Framework Wrote new “fencepost” marker selection algorithm for soybean researchers Developed new WPF application for managing soybean Trait Integration projects | | |
| Associate Web Developer | Polk County Government | <i>2008 – 2012</i> |
| <ul style="list-style-type: none"> Full stack web development with C# / .net framework | | |

Education

B.A., Central College, Pella, Iowa, *magna cum laude* *2006*
 Major: English; Minor: Philosophy

Volunteer Experience

JUMP (Johnston Youth Mentoring Program) *2015 – present*

- I spend about an hour a week with a student, playing board games, sports, cooking, etc. The purpose is to be a positive male role model and another caring adult in the student's life, but a little bit more like a friend than an authority figure.