

Summary

Experienced software engineer with interests in Python, 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, JavaScript/TypeScript, HCL, SQL
- Technologies: AWS, Terraform, Docker, k8s, Flask, React, Postgres, GitHub Actions, Jenkins
- Other: 12-factor app and CI/CD principles, automated testing

Experience

| | | |
|---|------------------------------|----------------------------|
| Senior DevOps Engineer | Signature Consultants | <i>Feb 2022 – present</i> |
| <ul style="list-style-type: none">• Building a self-service automation platform in Python around GitHub and other tools• Deploying and managing apps on OpenShift (RedHat-flavored Kubernetes) | | |
| Sabbatical | | <i>Jun 2022 – Feb 2022</i> |
| <ul style="list-style-type: none">• Took time off to build projects with Python and AWS• Created <u>project</u> showing how to run the latest versions of Python in AWS Lambda• Created <u>project</u> demonstrating use of GitHub Actions, Terraform, FastAPI on AWS Lambda | | |
| Production Engineer | Very Good Security | <i>May 2021 – May 2022</i> |
| <ul style="list-style-type: none">• 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 | | |
| 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: AWS: SQS, SNS, S3, Kinesis, EC2, ECS / Fargate, Lambda, RDS / Aurora, Beanstalk | | |

App: Postgres, Scala, Java, and Node.js / TypeScript / React
Monitoring: Cloudwatch, ELK stack
CI/CD: GitHub, Jenkins, Drone.io, Docker, Terraform, CloudFormation, bash and Python

Sr. Software Engineer **Granular** *Sep 2016 – Jan 2019*

- 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** *2015 – 2016*

- 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. Maintained legacy WPF apps.

Software Developer **DuPont Pioneer** *2012 – 2015*

- 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** *2008 – 2012*

- 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.

dsm Hack *2020*

- I was part of a team that made improvements to the Des Moines Heritage Trust web sites, photo albums, and information management.

City of Johnston Tree Board *2017 – present*

- Assist with city tree selection and annual public tree sale, advise on public trees