

## Summary

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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

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- 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

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### Sabbatical

*Nov 2023 – present*

- Preparing for 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
- Deployed and managed apps on OpenShift (RedHat-flavored Kubernetes)

### 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
- Created [project](#) demonstrating use of GitHub Actions, Terraform, FastAPI on AWS Lambda

### 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

### Senior SRE

**Lean TECHniques**

*Jan 2021 – May 2021*

- 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

<b>Sr. Software Engineer</b>	<b>Lean TECHniques</b>	<i>Feb 2019 – Dec 2020</i>
<ul style="list-style-type: none"> <li>• Worked on a distributed system for John Deere ISG that sends machine alerts and other notifications to dealers and customers worldwide</li> <li>• Improved the admin UI so dealers could manage multiple machines and techs per customer</li> <li>• Replaced a bunch of high-maintenance Python / Node.js scripts with Terraform</li> <li>• 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> </li> </ul>		
<b>Sr. Software Engineer</b>	<b>Granular</b>	<i>Sep 2016 – Jan 2019</i>
<ul style="list-style-type: none"> <li>• 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</li> <li>• 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</li> <li>• Maintained and enhanced NSIM, a SaaS distributed system for running nitrogen simulations using AWS EC2 Spot Fleet, Lambda, Step Functions, CloudFormation, S3</li> </ul>		
<b>Sr. Software Developer</b>	<b>DuPont Pioneer</b>	<i>2015 – 2016</i>
<ul style="list-style-type: none"> <li>• 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.</li> </ul>		
<b>Software Developer</b>	<b>DuPont Pioneer</b>	<i>2012 – 2015</i>
<ul style="list-style-type: none"> <li>• Wrote new “fencepost” marker selection algorithm for soybean researchers</li> <li>• Developed new WPF application for managing soybean Trait Integration projects</li> </ul>		
<b>Associate Web Developer</b>	<b>Polk County Government</b>	<i>2008 – 2012</i>
<ul style="list-style-type: none"> <li>• Full stack web development with C# / .net framework</li> </ul>		
<b>Education</b>		
B.A., Central College, Pella, Iowa, <i>magna cum laude</i>		<i>2006</i>
Major: English; Minor: Philosophy		
<b>Volunteer Experience</b>		
<b>JUMP</b> (Johnston Youth Mentoring Program)		<i>2015 – present</i>
<ul style="list-style-type: none"> <li>• 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.</li> </ul>		
<b>dsm Hack</b>		<i>2020</i>
<ul style="list-style-type: none"> <li>• I was part of a team that made improvements to the Des Moines Heritage Trust web sites, photo albums, and information management.</li> </ul>		