Keith R. Petersen

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Summary

Experienced software engineer with interests in cloud engineering/devops, AWS, and distributed systems. I care about simplicity, automation, resiliency, and reliability. I enjoy automating processes to increase the efficiency of others. I strive to build products that meet the customer's needs first and use whatever technology best serves that goal. I am also AWS Solution Architect – Associate certified.

Primary Skills & Expertise

Python	CloudFormation	TypeScript	Docker
EKS / Kubernetes	Terraform	Node.js	Bash

Professional Experience

Production Engineer, Very Good Security *May 2021 – present*

- Managed EKS clusters, migrated from outdated EKS version
- Terraform/Terragrunt for AWS resource management
- Configured logging and metrics with fluentd/fluentbit and grafana / Prometheus
- Wrote Python code to automate file processing

Senior Site Reliability Engineer, 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 with ECS

Software Consultant, Lean TECHniques *Feb 2019 – Dec 2020*

- I worked on a distributed system for John Deere ISG that sends machine alerts and other notifications to dealers and customers worldwide.
- Technologies used:
  AWS: SQS, SNS, S3, Kinesis, EC2, ECS/Fargate, Lambda, RDS/Aurora, Beanstalk
  App: PostgreSQL, Scala, Java, and Node/TypeScript/React
  Monitoring: Cloudwatch, ELK stack
  CI/CD: Github, Jenkins, Drone.io, Docker, Terraform, CloudFormation, Linux, bash and Python scripting

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

- Built a feature flags SaaS app using Python, Flask, Terraform, Docker, Kubernetes, DynamoDB, and other AWS services. Distributed across multiple AWS regions.
- Maintained and enhanced NSIM, a SaaS distributed system for running nitrogen simulations using AWS EC2 Spot Fleet, Lambda, Step Functions, CloudFormation, S3
- Recognized with Granular MVP cash award for improving NSIM, July 2018

Sr. Software Developer, DSI, 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, Field RIM, DuPont Pioneer *2013 – 2015*

- Wrote new “fencepost” marker selection algorithm for soybean researchers
- Developed new WPF application for managing soybean Trait Integration projects

Automation Test Developer, Field RIM, DuPont Pioneer *2012 – 2013*

- Wrote automated regression testing code for field research software apps

Web Developer, Two Rivers Marketing *2012*

- General web design and development

Associate Web Developer, Polk County Government *2008 – 2012*

- Developed web apps using ASP.NET MVC framework, admin for IIS web servers
- Developed and designed new county web sites with a CMS
- Switched the source control system to SVN from Visual Source Safe (before git got big)

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