

Introduction

I work on the Site Reliability Engineering team at Duo Security, a Cisco company. My current work focuses on building robust application delivery software for our cloud-hosted services. I have previously worked on maintaining and building new observability software.

Experience

- **Senior Software Engineer, Site Reliability** Ann Arbor, MI
Duo Security *June 2020 - present*
 - Interviewed and hired for a new SRE team in the UK, and spent 3 months in the UK bringing the team to on-call readiness
 - Working on building systems for declarative infrastructure using Terraform, and artifact delivery using Ansible on EC2 (legacy) as well as Argo CD on Kubernetes (new)
 - Worked on building and maintaining systems for logging, metrics, and alerting at Duo
 - Built a blue/green upgrade process for upgrading a ~150 node Elasticsearch cluster in place
 - **Technologies:** Python, AWS (EC2, RDS, CloudWatch, IAM, etc.), Kubernetes (EKS), Elasticsearch, Kibana, Grafana, Prometheus, Terraform, Ansible, Argo CD
- **Senior Software Engineer** Ann Arbor, MI
Groundspeed Analytics *October 2019 - June 2020*
 - Developed the software and infrastructure for **rowan**, a flexible system for generating reports from of ML-augmented insurance data with an intuitive DSL, used by customer-facing teams
 - Coordinated deployment of multiple services and machine learning models across automation, machine learning, and operations teams
 - Monitored health metrics for deployed services and data stores, including participating in an on-call rotation
 - **Technologies:** MongoDB, Python, Flask, Docker, AWS (ECS, EC2, EKS, Lambda, SQS, SNS, RDS, etc.), Terraform
- **Senior Software Engineer, Tools and Infrastructure** Ann Arbor, MI
Arbor Networks *January 2017 - October 2019*
 - Built the server (AWS) and client (on-device) components of a service for monitoring anti-DDoS devices in the field
 - Moved several legacy apps and services from traditional LAMP setups to microservice-style setups
 - Worked on design and development of multiple tools from simple command line tools to API-first web applications with ~300 users
 - Deployment and management for ~20 services and ~300 shared bare metal and virtual machines used for development, automated testing, and customer service
 - **Technologies:** Python (Django/DRF, **pytest**, **asyncio**), Serverless, Postgres, Docker, AWS (Lambda, SQS, RDS, ECS, etc.), Ansible, Shell scripting
- **QA Engineer, Network Security** Ann Arbor, MI
Arbor Networks *June 2011 - Dec 2016*
 - Wrote automated regression tests for the hardware and software components of multiple Arbor products that protected against DDoS attacks
 - Worked on understand and testing the behaviours and quirks of different protocols used over the Internet including IP, TCP, UDP, DNS, HTTP, BGP, etc.
 - **Technologies:** Python (Selenium, **unittest**), Shell scripting, Network tools (Wireshark, **tcpdump**, etc.), Linux

Education

- **University of Michigan** Ann Arbor, MI
M.S. in Electrical Engineering:Systems *Aug 2009 - May 2011*
- **BITS Pilani** Goa, India
B.E. (Hons.) in Electrical and Electronics Engineering *Aug 2005 - May 2009*