

## 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*