NICOLAS MITCHELL

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https://nico-mitchell.com

About Me

Nicolas Mitchell is a software engineer focused on networking, automation, dev-ops, and distributed system design. When he's not working, he can be found in the climbing gym, gaming, reading, cooking, or contributing to open-source projects.

Education

B.S. - Computer Science and Engineering
University of Louisville - May 2020

Skills

Areas of Expertise: Cloud Infrastructure, networking, distributed systems, containers, concurrency, CI/CD, architecture
Programming and Scripting Languages: Go, C, JavaScript, C++, Bash, Java, Python, Rust
Other Technologies: AWS, Kubernetes, Docker, Ansible, Linux, SQL and NOSQL Databases, React, Git, Splunk, Prometheus, Terraform

Open-Source Contributions

Godot Engine
Zellij
Istio
Kubernetes

Hackathons

FirstBuild Hack the Home	2017, 2018
VandyHacks	2017
DerbyHacks	2018

Hobbies and Talents

Spoken Languages: English (fluent), Spanish (fluent), Portuguese (intermediate)
Music: Guitar (12 years), Singing (in a band), production (making beats with friends)
Fitness: Indoor rock climbing (bouldering), weightlifting

Work Experience

Software Engineer – Infrastructure   December 2021 – Present
Splunk   San Francisco, CA
- Architected and implemented new asynchronous job scheduler using Redis
- Designed and implemented Prometheus and Splunk alerts and dashboards
- Fixed blocking distributed processing design problem by re-architecting AWS Lambda code to take full advantage of an SQS Queue
- Provisioned new AWS resources in multiple environments using Terraform
- Used jsonnet files to templatize and automate Kubernetes deployments

Software Engineer – Observability   September 2020 – December 2021
SAP   Palo Alto, CA
- Implemented JWT-based OAuth server for an automated workflow scheduler using an existing LDAP server
- Created visibility into critical production systems by building Splunk dashboards
- Ensured safety of production deployments by implementing deployment tests
- Designed CI/CD pipelines and automated deployments using Ansible

Software Engineering Intern – Data Platform   June 2019 – August 2019
Red Ventures   Fort Mill, SC
- Developed backend microservices in Golang for an internal data pipeline software
- Facilitated new software features by writing SQL database migrations
- Allowed for data connections between third party data providers like Segment and internal data pipeline by building Golang plugins
- Improved UX and integrated new components to web frontend with ReactJS

Visiting Research Assistant   January 2019 – May 2019
University of Southern California – Information Sciences Institute   Waltham, MA
- Researched and developed a system component for a DARPA funded project to automatically detect and respond to phishing emails
- Developed new features and fixed bugs for a Python natural language processing framework

Software Developer Intern   January 2018 – April 2018
El Toro   Louisville, KY
- Wrote an internal API in Go to schedule tasks using AWS Step Functions
- Facilitated integrations for various databases including MongoDB, Aerospike, and PostgreSQL by creating and implementing a common interface
- Sped up data ingestion script by over 10x by implementing a worker pool for concurrent processing

Student Tutor   August 2017 – April 2020
University of Louisville Resources for Academic Achievement   Louisville, KY
- Tutored students in Python, C, C++, Data Structures and Algorithms, and other CS topics

Applied Experience

Embedded Systems: Interfaced and displayed vehicle ECU data with an Arduino and LED screen, built a self-orienting solar panel using an Atmel microcontroller, built a touch-sensor game on a Raspberry Pi.
IoT/Serverless: Designed, developed, and deployed an IoT pilot project that ran sensor data through AWS IoT to an Aurora Serverless database cluster using a lambda function.
Networking/Architecture: Managed microservices in an AWS VPC separated into public and private subnets. Included components were a database, web API, and web client. Integrated web API and client with Auth0 SSO.
Distributed Systems: Developed networked chat room in Golang using a custom TCP protocol, deployed on AWS Elastic Containers. Developed naïve implementation of a gossip protocol deployed on a network of docker containers.