

# Griffin Choe

SOFTWARE ENGINEER · NEW YORK CITY · UNIVERSITY OF MICHIGAN

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## Experience

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### Coinbase

New York City

SOFTWARE ENGINEER, SCALABILITY

June 2022 - Jan. 2023

- Contributed to Cloud's CI/CD platform to help blockchain protocol teams scale, using Concourse CI, GoLang, Docker, ytt, AWS (EKS, RDS, DynamoDB, ECS, EC2, S3, Secrets Manager, etc.)
- Built and deployed a credential rotation service in AWS ECS to rotate GitHub access credentials hourly across the platform
- Designed, built, and deployed a webhooks service using Go, Docker, Terraform, AWS ECS, and Secrets Manager that triggers pipelines upon GitHub commits, speeding up pipeline trigger times by 99%
- Designed and built a SOC-2 compliant pipeline iteration workflow that allows teams to update and trigger their Main and PR pipelines just by pushing to GitHub
- Independently handled several on-call incidents, including the LastPass security incident which involved migrating every pipeline on our platform onto the authentication service I built in 1 day

SOFTWARE ENGINEER INTERN, PLATFORM INFRASTRUCTURE

Jan. 2022 - Apr. 2022

- Built a proof of concept to secure the infrastructure team's software supply chain at Coinbase Cloud
- Created a method within our own infrastructure (Concourse CI, GKE, Artifact Registry, Docker, Secrets Manager, etc.) to perform hermetic, reproducible container image builds
- Wrote Terraform to define all GCP infrastructure
- Met stretch goals by building a canary pipeline in Concourse to periodically run health checks across Cloud's infrastructure

### Amazon

Remote

SOFTWARE ENGINEER INTERN, AMAZON SCOUT ROBOTICS

May 2021 - July 2021

- Developed the user-initiated "Unlock Hatch" feature on Scout, Amazon's autonomous package delivery robot
- Implemented the front-end UI on both mobile and desktop, including buttons, loading spinners, and success/failure messaging
- Built the back-end controller in Java to trigger and verify state change
- Built an API in TypeScript to send out an SNS message upon failure, using AWS API Gateway, CloudFormation, DynamoDB, Lambda, and SNS
- Created a Lambda in Java to process the SNS messages sent out of the API and take alternative action
- Wrote integration tests for the Lambdas I developed to ensure the entire system functioned properly
- Met stretch goals by implementing CDK generated metric dashboards for various Lambdas on our AWS stacks

## Education

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### Univeristy of Michigan College of Engineering

Ann Arbor, MI

B.S.E. IN COMPUTER SCIENCE

Sept. 2019 - Dec. 2021

- GPA: 3.6/4.0
- Coursework: Distributed Systems, Operating Systems & Advanced Operating Systems Projects, Data Structures & Algorithms, Web Systems, Computer Vision, Software Engineering, Computer Organization, Foundations of Computer Science

## Projects

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### Sharded Key/Value Service

2021

- Built a sharded key/value service in Go that partitions keys and values over a set of replica groups
- Implemented the Shard Master to distribute shards across a set of replica groups, reconfiguring when shards join and leave their respective groups
- Implemented the fault-tolerant sharded key/value system to reliably serve client Get, Put, and Append RPCs across many servers (each server serving one replica group)
- Leveraged Paxos to accurately log sequences of Get, Put, and Append operations

### Network File Server

2021

- Implemented a multi-threaded network file server in C++ to synchronously handle client requests for creating, deleting, writing, and reading files/directories
- Used RAIL techniques with reader/writer locks to minimize memory usage and used hand-over-hand locking to ensure proper synchronization

### ghostern.com

2020

- Built a web application with one friend where users report whether or not they were "ghosted" by a company after applying or interviewing for an internship
- Handled the backend development for the project, using Flask and SQLite to build a REST API
- Deployed the backend with DigitalOcean and the frontend with Netlify, using Cloudflare's CDN to deliver the site's content

## Programming Skills

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**Languages** Go · C/C++ · Java · Python · TypeScript   **Technologies** Kubernetes · Terraform · AWS · GCP · Linux