

# Alex Ko

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## TECHNICAL SKILLS

Expertise: Python, PostgreSQL, Docker, Bash, AWS, GCP, Terraform, REST APIs

Experienced: Django, FastAPI, Redis, Typescript, Javascript, React, Node, Kubernetes, Apache Kafka

## EXPERIENCE

Headway | Infrastructure Engineer | New York, NY

Sep 2023 - Dec 2024

- **Designed and implemented a new architecture for handling database migrations**, decoupling them from application code changes to enable zero-downtime releases. Led the overhaul by creating the new system, training developers, and streamlining processes to enhance release velocity. (*Github Actions, Bash*)
- **Drove the adoption of Tailscale to establish a zero-trust network** for ephemeral deployments. Authored detailed design documents, conducted training sessions, and championed the initiative to enhance network security and developer productivity. (*Tailscale, AWS CodePipeline, Github Actions, Terraform*)

Upstart | Software Engineer, DevTools | San Mateo, CA

Oct 2021 - Nov 2022

- **Built an Internal Developer Platform (IDP) to enable fully self-service deployments**, implementing a configuration schema and ingestion engine. Enhanced developer experience to support the proliferation of microservices without compromising development velocity or operational efficiency. (*Python3, Harness*)
- **Spearheaded the development of an internal platform CLI for Docker-based application packaging**, delivering standardized abstractions and simplifying interactions with underlying infrastructure, improving developer productivity and consistency. (*Python3, Pydantic*)

Ordermark | Senior Infrastructure Engineer | Los Angeles, CA

Nov 2020 - Sep 2021

- **Revamped CI/CD pipelines to accelerate deployment and application start-up times**, leveraging multi-stage Docker builds to achieve a ~60% reduction in image size and a ~45% decrease in remote image pull times, significantly improving operational efficiency. (*Docker, CircleCI, Terraform, AWS ECS/ECR*)
- **Led the transition from manual to automated Terraform operations**, developing tooling, workflows, and comprehensive documentation, including an RFC, to drive adoption. Enabled scalable Terraform usage, supporting the growth and efficiency of the engineering team. (*Terraform Cloud, Atlantis, Github Actions*)

Ordermark | Software Engineer | Los Angeles, CA

Dec 2017 - Oct 2020

- **Guided the backend team in adopting Docker and virtual environments**, enabling more flexible deployments and significantly improving the portability of the local developer experience. (*Docker, Poetry*)
- **Developed an internal Python utility to streamline ECS task orchestration**, abstracting away underlying complexities to enhance developer productivity and reduce cross-codebase duplication. (*Python3, Boto3*)

## EDUCATION

Hack Reactor Bootcamp

2017

St. John's College | Philosophy Major

2011