

Timothy Kuo

New York City, NY • timykuo@gmail.com • <https://www.linkedin.com/in/tim-kuo/> • www.timkuo.com

EXPERIENCE

ENERGYHUB

Senior Software Engineer

June 2023-Present

- Key developer for a Java/Spring service that connects 4,900+ devices across EVSEs, EVs, batteries, and thermostats to EnergyHub's platform
- Led 3 engineers alongside 2 teams to spearhead the first integration into a microservice through asynchronous processing via SQS and DynamoDB as a message buffer
- Created comprehensive metrics and monitoring through Datadog and wrote corresponding playbooks
- Wrote Github Actions workflows to automatically run regression tests and deploy Docker images to AWS ECS

COLOR HEALTH

Software Engineer II on Operations Platform

May 2022 - March 2023

- Key developer on a web app hosted on AWS ECS/Docker for Color's wet lab to track a sample's test state machine
- Implemented rollback functionality for lab state machine, wrote its runbook, and trained support team on its usage, eliminating engineering involvement for related tickets (5%)
- Redesigned a manual file syncing system for sending raw lab data using S3 events and SNS
- Built a tool for medical geneticists to sign off lab test results via React and Django REST Framework instead of manually, vastly increasing their signout rate by more than 10x

AMAZON WEB SERVICES

SDE I & II on EC2

August 2019 - March 2022

- Lead developer for a key service in AWS EC2, a monitoring and command/control distributed systems service for over 60,000 devices that handles all incoming and outgoing EC2 network traffic
- Resolved a data syncing bottleneck from 240 to 50 seconds by designing and implementing a DynamoDB push and poll system that replaced the follower-leader P2P architecture with 0 user disruption in production
- Optimized in-memory caching logic to be event driven for vital EC2 API endpoints, boosting response time by 70%
- Designed and implemented CI/CD plan for EC2 service with integration test suites and canary testing, reducing total ticket count by 20%
- Trained 4 other engineers on the team on service architecture and documented it on a wiki for the organization

AMAZON WEB SERVICES

SDE Intern on AWS Sumerian

2018

- Implemented multi-section of objects, such as shift/ctrl-click logic, deletion, duplication, and drag-drop using Javascript and AngularJS

EDUCATION

CASE WESTERN RESERVE UNIVERSITY

Master of Science, Major in Computer Science

2018-2019

Bachelors of Science, Major in Computer Science

2014-2018

LANGUAGES AND TOOLS

Highly Proficient: Python, Java, AWS, Git

Proficient: Go, Docker, Django