Ryo Nishikawa

Cloud Support Engineer (DevOps) at AWS

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Cloud Support Engineer at AWS with 5+ years of software engineering experience, currently developing the Kintsugi MCP Server—a Python-based automation platform that streamlines troubleshooting workflows for 5000+ support engineers globally. Skilled in building APIs, distributed systems, and event-driven architectures using Python (Flask, Django, FastAPI), with expertise in concurrent programming (asyncio, multiprocessing) and cloud infrastructure. Passionate about creating tools that improve team productivity and solving complex technical problems at scale.

Work Experience

Cloud Support Engineer (DevOps)

2024 - Present

Amazon Web Services (AWS)

Build Python automation tools and provide technical support for AWS distributed systems, specializing in Infrastructure as Code and event-driven architectures.

- Engineered Python-based Model Context Protocol (MCP) servers using FastAPI and asyncio for concurrent API calls, reducing troubleshooting time by 45 minutes per case globally across 5000+ engineers
- Built distributed CloudTrail log analysis system using Python (asyncio, DuckDB) to process events concurrently, analyzing API failures across multi-region AWS deployments
- Resolve 20+ technical cases monthly for distributed systems (Lambda microservices, event-driven architectures, API Gateway), guiding best practices for security and performance
- Collaborate with service teams on P0/P1 incidents; author technical documentation and mentor engineers on Python automation and distributed systems troubleshooting

DevOps Engineer

2023 - 2024

Onside

Engineered and maintained CI/CD infrastructure for biosecurity web portal and mobile applications, ensuring regulatory compliance and high availability.

- Optimized TeamCity CI/CD pipelines by implementing parallel build execution and resource allocation strategies, reducing deployment time by 40% while maintaining 99.9% uptime
- Configured TeamCity agents to handle multiple concurrent jobs, maximizing infrastructure utilization and improving build throughput for development teams
- Orchestrated complete CI/CD migration from TeamCity and Octopus Deploy to Azure Pipelines, consolidating build and deployment processes with zero-downtime strategy

Software Engineer

2022 - 2023

HealthStream

Built cloud-native data platform with event-driven microservices for healthcare capacity management, processing real-time data streams and feeding SageMaker models for patient forecasting in HIPAA-compliant environment.

- Architected event-driven data pipeline using Python and Amazon MSK (Kafka) to process real-time healthcare data streams, integrating Lambda microservices with SQS for reliable message delivery
- Built distributed data processing system storing events in AWS S3, MongoDB, and triggering Lambda functions for real-time analytics, handling 100K+ events daily
- Developed Python APIs with authentication, rate limiting, and error handling for data ingestion and retrieval, ensuring HIPAA compliance
- Engineered automated CI/CD pipelines using Infrastructure as Code (Pulumi, Terraform), implementing comprehensive testing and deployment automation

Junior Software Engineer

2021 - 2022

Wyma Solutions

Developed IoT monitoring platform and computer vision applications for industrial automation, building backend APIs and real-time data pipelines for agricultural machinery.

- Built RESTful APIs using Flask, Django, and FastAPI for computer vision backend services, implementing authentication, rate limiting, and comprehensive error handling for production systems
- Engineered real-time data pipeline collecting PLC metrics (conveyor speed, torque, water levels) from industrial machinery, streaming to TimescaleDB and InfluxDB via Telegraf for time-series analysis
- Implemented computer vision quality control system using OpenCV for image capture and processing, with concurrent Python code (asyncio for IO-bound network calls, multiprocessing for CPU-intensive image analysis)
- Deployed microservices using Docker containers on Oracle Cloud, integrating Grafana dashboards for real-time monitoring of 50+ industrial machines across multiple sites

- Automated infrastructure provisioning using Ansible playbooks, configuring microcontrollers and edge devices across production facilities

Technical Skills

Programming & Frameworks

Python (5+ years), Flask, Django, FastAPI, asyncio, multiprocessing, JavaScript, Node.js, Java, C, Vue.js

API Development & Integration

RESTful API design, authentication (JWT, OAuth), rate limiting, error handling, API Gateway, microservices architecture

Distributed Systems & Streaming

Amazon MSK (Kafka), SQS, Lambda, event-driven architecture, message queues, concurrent programming (IO/CPU bound)

Databases & Time-Series

PostgreSQL, TimescaleDB, InfluxDB, MySQL, MongoDB, DuckDB, SQL optimization

DevOps & Infrastructure

Docker, Kubernetes, Ansible, TeamCity, GitLab CI/CD, Azure Pipelines, monitoring (Grafana, CloudWatch), alerting

Cloud Platforms

AWS (Lambda, S3, EC2, MSK, SQS, CloudFormation, CDK), Azure (DevOps, App Service), Oracle Cloud

Education

BSc in Computer Science

University of Canterbury
2018 - 2020

Awards

Most Valuable Player Award
AWS Support Engineering
Recognized for exceptional productivity and quality, raising the bar for team performance

Rising Star Award
AWS Support Engineering
Awarded for rapid ramp-up and quick adaptation to AWS culture as a new hire

CloudFormation SME Badge
AWS Support Engineering
Deep technical expertise in CloudFormation service architecture, known issues, and complex case resolution

2nd Place - HackChch

48 Hour Smart City Hackathon

Content

AWS Knowledge Center Video
Resolving "Already Exists" Error in AWS CDK

Languages

English (Fluent)
Japanese (Native)

Interests

Rugby & Sports
Powerlifting/Crossfit
Neovim