

Joseph Karl Crisostomo

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SUMMARY

Software engineer with hands-on DevOps experience building and operating containerized services across on-premise Linux and cloud (AWS). I design, develop, debug, and maintain software end to end — from CI/CD build pipelines and automated infrastructure provisioning to automated testing and production monitoring. I work iteratively with frequent demos, collaborate through code review, and pick up new tools quickly across Python, JavaScript/React, Ruby, and SQL. B.S. in Computer Science.

SKILLS

- **Languages:** Python, JavaScript, TypeScript, Ruby, SQL, Shell, HTML, CSS
- **DevOps / CI-CD:** Docker, Kubernetes (AWS EKS), CI/CD build pipelines (AWS CodeBuild, ECR, S3), Kamal (containerized zero-downtime deploys), infrastructure-as-code (AWS CloudFormation), Git
- **Cloud / Infrastructure:** AWS (EKS, CloudFormation, S3, CodeBuild, ECR, RDS, ElastiCache/Redis, Amazon MQ, EC2, CloudWatch, SNS), on-premise Linux (Ubuntu)
- **Monitoring / Testing:** AWS CloudWatch (metrics, logs, alarms), Grafana K6 (smoke + load testing), automated unit/integration testing, Playwright
- **Databases:** PostgreSQL, AWS RDS, Redis (ElastiCache), query optimization
- **Frameworks:** React, Next.js, Node.js, Ruby on Rails, Django

EXPERIENCE

Backend Developer — Department of Science and Technology (DOST-ASTI)

On-site · Feb 2024 – March 2026

- Managed containerized (Docker) services deployed both on an on-premise Linux server (Ubuntu) and on the cloud (AWS), orchestrated with AWS Elastic Kubernetes Service (EKS).
- Built an automated CI/CD build pipeline: source in S3, container builds in CodeBuild, and images stored in Elastic Container Registry (ECR).
- Enabled fast, repeatable deployments by automating infrastructure provisioning with AWS CloudFormation (infrastructure-as-code).
- Integrated AWS data services: RDS as the core database, ElastiCache (Redis) for caching, and Amazon MQ as a message broker.
- Initiated unit testing from 0 to ~90% code coverage, and ran automated smoke and load testing with Grafana K6 — improving maintainability and reliability.
- Performed database query optimization through in-depth inspection and root-cause analysis (debugging and maintaining existing software).

Web Developer (Intern) — Dashlabs.ai

Remote · Aug 2022 – Sept 2022

- Contributed to the maintenance of the platform's Patient Management Service.
- Handled customer queries across multiple channels (email, chat).

PROJECTS

Aqualytix — Water-Quality Monitoring Platform

aqualytix.hackwithsef.xyz

- Built and deployed a production monitoring platform end to end (Ruby on Rails, PostgreSQL), shipped as 7 independently deployable, demoable vertical slices.
- Containerized and deployed with Kamal (zero-downtime) on AWS EC2 (Ubuntu); configured S3 storage and resolved real SSH/auth deployment issues.
- Set up AWS CloudWatch monitoring — host metrics, log shipping, 5 alarms, and SNS email alerting — plus a Rails test suite (model, controller, mailer tests).

Kuryente Watch — Real-Time Community Grid Status (PWA)

infanta.kuryentewatch.app

- Built a real-time crowdsourced power-status app (Rails 8, PostgreSQL, Hotwire, Leaflet) with live map updates via Action Cable and Web Push notifications.
- Containerized with Docker and deployed via Kamal to a Linux VPS with TLS; quality-gated with Minitest, Capybara/Selenium, Brakeman, and RuboCop.

AI-as-a-Service Platform — DOST-ASTI

- Designed a platform standardizing how AI models are developed, deployed, and served across institutes, cutting model integration from ~2–3 months to days.

EDUCATION

B.S. in Computer Science — Polytechnic University of the Philippines

2019 – 2023