

Marty Ross

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Career Summary

- ❖ Developed an in-house serverless Golang backend and Typescript/Angular SPA frontend to automate SLO workflow definition, calculation, and tracking of Error Budgets across >2,000 enterprise teams using NewRelic Agents & NRQL, OpenTelemetry, and Snowflake data, fostering a paradigm shift towards achieving aggressive milestones.
- ❖ 5+ years full-stack Enterprise Cloud development (AWS, GCP) using Golang, Java, Node.js, Typescript, Python.
- ❖ Construction of data pipelines using Java, gRPC, Kafka, Cassandra, feeding Apache Spark.
- ❖ Experienced with Terraform, Jenkins, GitHub Actions, S3, Lambda, CI/CD, and scalable architectures.
- ❖ Recognized for providing excellent customer service and mentoring team members through a growth mindset.

Skills

- ❖ Full-stack: Golang / Java / Nodejs / PHP (backend), React / Angular (frontend)
- ❖ Languages: Golang (>4yr), Typescript (>5yr), Node.js (>7yr), Python (>8yr), Java (>10yr)
- ❖ Serverless: AWS Lambdas, Cloud Functions, Step Functions, Workflows, APIs, Cron Jobs & Event Handlers
- ❖ Message Busses: SQS/SNS/EventBridge, Kafka, Cassandra, RabbitMQ, Mulesoft
- ❖ Persistence: NoSQL (DynamoDB, Cassandra, Kafka KTable, Redis), SQL (Oracle/PL/SQL, MySQL, Postgres)
- ❖ Microservice Integration: REST, gRPC, Event Bus APIs & Docker & Kubernetes Container Orchestration
- ❖ TDD: Martin Fowler's "Testing Pyramid", Golang tests, Junit, @SpringBootTest, Jest, Minikube
- ❖ CI/CD using Jenkins, CircleCI, Git Actions, Pipeline/Infrastructure as Code: Terraform, Helm, CloudFormation

Standards / Frameworks

- ❖ Authentication/Authorization/Access: OAuth 2.0, OpenID, LDAP, AWS IAM/Cognito
- ❖ Network: TCP/IP, OSI 7-Layer
- ❖ Schemata: XML, HTML, gRPC, JSON Schema, OpenAPI
- ❖ Large Language Models: Langchain, OpenAI, Gemini, Ollama, RAG, Chroma
- ❖ Observability: OpenTelemetry, NewRelic, OpenTracing, Zipkin
- ❖ Cloud: AWS, Google Cloud, Azure

Professional Experience

CapitalOne(San Francisco, CA) 09/2023 - 06/2024 Sr. Software Engineer

- ❖ Developed Enterprise-wide Site Reliability service in AWS Lambda/Golang, DynamoDB with Angular/Typescript frontend.
- ❖ Enabled over 2,000 teams to define their own Service Level Indicators (SLIs) and related Service Level Objectives (SLOs).
- ❖ Implemented Error Budget Dashboards, Notifications & SLO Approval Workflows in Angular/Typescript.
- ❖ Created Golang APIs (backend) and Angular/Typescript (front-end) to collect, analyze and present performance observability metrics collected using NewRelic NRQL, Open Telemetry, DynamoDB, Snowflake, and other sources.

Self Employed (Berkeley, CA) 04/2023 - 09/2023 Independent Consultant

- ❖ Embraced several paid and volunteer opportunities using Java, C# and PHP (WordPress)

Crunchyroll (San Francisco, CA) 04/2021 - 04/2023 Sr. Software Engineer

- ❖ Served as Golang Development Lead during my tenure to complete one or more concurrent strategic functional & non-functional CMS improvement initiatives, helping to bolster team's reputation and meet corporate goals.
- ❖ Performed strategic refactoring of four backend Golang codebases to increase their testability & code coverage by an average of 25%, resulting in greater stability, confidence and developer productivity.
- ❖ Optimized MySQL database access plans after surveying "in the wild" query and update persistence behaviors for the most critical two of the CMS services, resulting in increased throughput by 20-50%.
- ❖ Reduced frequency and MTTR of "sev 1" issues (e.g., stemming from NPE, OOM or API drift) by 30% through the above improvements, and exposed custom metrics using NewRelic Agent while improving dashboards using NRQL.

Self Employed (Berkeley, CA) 04/2020 - 04/2021 Independent Consultant

- ❖ Embraced several paid and volunteer opportunities in the first year of the COVID epidemic.
- ❖ Created a new data processing pipeline using the Play Framework and Spring Batch toolset.
- ❖ Started a open-source event-processing pipeline project using Kafka, Golang, Python, React/Typescript, Kubernetes
- ❖ Maintained and enhanced a non-profit website using WordPress.

Revinate (San Francisco, CA) 04/2018 - 04/2020 Staff Engineer

- ❖ Decomposed a Java monolith into manageable and extendable services within a Kubernetes cluster running within AWS.
- ❖ Implemented multi-sourced (push events, pull ETLs) data pipeline with gRPC normalization schemata and Kafka / KTable backbone to deliver high throughput customer streams to Apache Spark and other consumers.
- ❖ Engineered a Groovy script-based plug-in architecture, empowering field technicians to implement site-specific ETL customizations and resolve issues independently. This enhancement increased core team availability by 50%, facilitating an accelerated schedule for roadmap functionality improvements.
- ❖ Utilized Docker, Minikube (Kubernetes), Terraform and Helm Charts to streamline handoff from local development & component-level testing to the Jenkins-based CI/CD integration tests & production deployments.

Sabbatical (Berkeley, CA) 12/2017 - 04/2018

- ❖ Sabbatical abroad with family.
- ❖ Learned Golang, Containerization and AWS EC2 and S3 Cloud Services and APIs using Coursera.

Navis (Oakland, CA) 10/2011 - 12/2017 Staff Engineer

- ❖ Led implementation of the Navis Equipment Control Interface (ECI) facade REST API in Java Spring Boot - a strategic refactoring of the flagship Navis Terminal Operating System (TOS) architecture - enabling new Crane Control Systems to be on-boarded four times faster, and reducing the time needed to develop and release new TOS features.
- ❖ Reduced MTTR by 15% through strategic use of both APM and custom metrics, and established on-premises dashboards with NewRelic; visualized protocol traces significantly improved troubleshooting efficiency.
- ❖ Created CI/CD tooling using GitHub and Jenkins, automating test coverage reporting, promoting test driven development (TDD).

Education / Training

- ❖ **Bachelor of Arts (BA)**
University of California (Los Angeles, CA)
Economics, Psychology (with emphasis on econometrics and statistics)