ALVIN DE CASTRO

Full Stack Engineer | Enterprise Products, AI Workflows & Integrations

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PROFILE

Software engineer and Programmer Analyst with 10+ years delivering business applications, APIs, integrations, data workflows, and cloud services. Build from discovery through design, implementation, testing, deployment, and production support. Recent work combines Java/Spring Boot, PostgreSQL, browser automation, dashboards, and retrieval-based AI in operationally complex higher education systems. Former SaaS and enterprise engineer with AWS, Docker, Kubernetes, CI/CD, observability, code review, and mentoring experience. Based in Metro Vancouver.

TECHNICAL STRENGTHS

Product and backend: Java 21, Spring Boot, Go, Python, C#/.NET, REST, gRPC, Protocol Buffers, secured APIs, workflow automation, dashboards, third-party integrations.

Data and cloud: PostgreSQL, Oracle, MySQL, Redis, Kafka, AWS, Azure, Docker, Kubernetes, Linux, Azure DevOps CI/CD.

AI and reliability: RAG, LLM APIs, provider routing, redaction, fallback paths, human review, Playwright, JUnit 5, OpenTelemetry, Prometheus, Grafana, logs, traces, metrics.

PROFESSIONAL EXPERIENCE

Programmer Analyst | Douglas College | British Columbia, Canada | May 2024 - Present

- Build Java 21/Spring Boot services, secured REST APIs, workflow automation, analytics endpoints, and dashboard views for enterprise administrative processes; use PostgreSQL, Redis, and Docker-based environments.
- Develop an internal retrieval-based knowledge assistant over institutional documentation; focus on relevant source context, access-aware workflows, and useful responses.
- Create Playwright automation for business workflows with parameterized data, screenshots, logs, and reporting; use failures and stakeholder feedback to refine scenarios and releases.
- Integrate Banner, Oracle, Microsoft identity, Moneris payments, SFTP, reporting tools, and browser applications through APIs, databases, and batch/file exchanges.
- Work with users and technical teams to understand processes, clarify acceptance criteria, demonstrate changes, document operations, investigate incidents, and carry fixes through production.

Software Developer - SaaS | Optigo Networks Inc. | Canada | Jan 2023 - Nov 2023

- Developed Go microservices, Kafka pipelines, payment integrations, third-party APIs, and monitoring dashboards for a real-time, customer-facing network visualization product.
- Investigated production defects using telemetry, logs, API behaviour, and data-flow analysis; implemented and validated fixes before release.

Software Senior Engineer | Dell Technologies | Singapore | Apr 2020 - Dec 2022

- Built Java and Go microservices in AWS and Azure, migrated legacy tools to Kubernetes, and implemented CI/CD through Azure DevOps.
- Added Prometheus, Grafana, InfluxDB, and tracing to support monitoring and production diagnosis; reviewed designs and code and mentored engineers across distributed teams.

PROFESSIONAL EXPERIENCE (CONTINUED)

Senior Engineer | NCS Pte. Ltd. | Singapore | Mar 2017 - Apr 2020

- Designed gRPC APIs and Protocol Buffer contracts and integrated them into Apache NiFi data flows for enterprise pipelines.
- Built reusable services with operational logging, data validation, integration testing, release support, and technical handoff.

Earlier software engineering roles | Peter Klare Consulting, Palo IT, SunGard | 2007 - 2017

- Built enterprise Java and C#/.NET applications, SQL-backed business workflows, APIs, and reporting integrations; supported releases and production issues.
- Led architecture discussions, code reviews, implementation, testing, documentation, and mentoring in cross-functional teams.

SELECTED PRODUCT & AI WORK

AI-assisted workflow QA platform | Java 21, Spring Boot, Playwright, PostgreSQL, Redis

- Built secured APIs, persisted run history, dashboards, automated tests, screenshots, logs, and metrics for repeatable validation of business workflows.
- Prototyped LLM-assisted failure summaries with provider routing, caching, sensitive-data redaction, deterministic fallbacks, token/cost visibility, and human review.

Local coding agent runtime | Go, Qwen, llama.cpp, OpenTelemetry

- Built a personal local agent runtime and telemetry proxy to measure latency, token use, throughput, context growth, errors, and model failure modes.

EDUCATION & CERTIFICATIONS

Bachelor of Science in Information Technology | Bulacan State University, Philippines

Microsoft Certified: DevOps Engineer Expert (AZ-400) | Azure Administrator Associate (AZ-104) | Azure Fundamentals (AZ-900) | Certified ScrumMaster

WORK AUTHORIZATION

Canadian open work permit valid until August 2028 | Based in Metro Vancouver