

# Jonathan Ayson Villalon

Senior Full Stack Software Engineer

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## PROFESSIONAL SUMMARY

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Senior Full-Stack Software Engineer with 10+ years of experience building scalable web platforms, enterprise applications, and multi-tenant SaaS systems for US and UK clients. Specialized in cloud-native architecture on AWS, RESTful API design, event-driven systems, AI-driven solutions, and modernization of legacy systems into high-performance, reliable platforms.

Proven track record of resolving large-scale performance bottlenecks, improving system reliability, and delivering production-ready systems that scale efficiently. Experienced working in fully remote, cross-functional teams, collaborating closely with product, QA, and DevOps to ship high-quality software.

Passionate about designing maintainable architectures, resilient APIs, and scalable frontend systems that support long-term growth and stability.

## KEY ACHIEVEMENTS

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- Designed and maintained end-to-end **CI/CD** pipelines using GitHub Actions, leveraging **Docker** for containerization, reproducible builds, and environment consistency across development and production.
- Implemented automated code review workflows using **GitHub Copilot** to analyze pull requests and proactively identify edge cases and potential issues.
- Strengthened platform security and production reliability through **FusionAuth**-based authentication/authorization, **Cloudflare** edge protection, and **Sentry-driven** incident monitoring.
- Built and maintained customer platforms serving **50K+ active users** across multiple US service territories.
- Reduced API requests by **~60%** through caching strategies and optimized query patterns.
- Improved frontend responsiveness by **~40%** using virtualization and efficient state management.
- Reduced administrative workload by **~50%** through automation of reporting and operational workflows.
- Optimized order processing latency from **8–12 seconds to ~1–2 seconds** through database indexing and backend optimization.
- Delivered multi-tenant SaaS platforms used by **85+ business clients and thousands of active users**.

## TECHNICAL SKILLS

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- **Languages:** C/C++, JavaScript, TypeScript, Python, Java, Kotlin, PHP, C#, Ruby, Go, SQL
- **Frontend:** React.js, Next.js, Redux, Vue.js, Nuxt.js, Angular, Angular Material, Vuex, NgRx, RxJS, Zustand, Apollo Client, PrimeNG, Ember.js, Vanilla JS, D3.js, Chart.js, Fabric.js, Pixi.js, Konva.js, Canvas, SSR/SSG, SCSS, SASS, Tailwind CSS, Bootstrap, Material UI, Chakra UI, Webpack, Vite, Babel, ESLint, NPM, Gulp, Figma, Adobe XD
- **Backend & APIs:** Node.js, Express.js, Nest.js, Django, Flask, FastAPI, Spring Boot, Ruby on Rails, ASP.NET Core, Laravel, Symfony, Gin, REST APIs, GraphQL (Apollo Server), WebSockets
- **Mobile Development:** Android, iOS, Swift, SwiftUI, Objective-C, React Native
- **Databases & Storage:** PostgreSQL, MySQL, MS SQL, MariaDB, MongoDB, DynamoDB, Supabase, Firebase Firestore, Azure SQL, Amazon RDS, Elasticsearch, MongoDB Atlas
- **Cloud & DevOps:** AWS, GCP, Azure, Firebase, Supabase, Cloudflare, Heroku, Docker, Kubernetes, Terraform, Pulumi, Jenkins, CircleCI, GitHub Actions, RabbitMQ, Kafka, Linux, n8n, Zapier
- **CMS & E-Commerce:** WordPress, Magento, Shopify, Strapi
- **Testing & Quality:** Jest, Cypress, React Testing Library, Enzyme, Jasmine, Mocha, Chai, Playwright, Selenium, QUnit, PyTest, Puppeteer
- **Experimentation & Analytics:** A/B Testing, Feature Flagging, Conversion Tracking, Google Analytics, Event Instrumentation, Funnel Analysis, DOM Manipulation
- **Methodologies & Tools:** Agile (Scrum, Kanban), TDD/BDD, Waterfall, Git, Github, Bitbucket, Jira, Slack, Linear, Notion, Asana, OpenAPI, Swagger, Postman
- **AI developer tools:** Cursor, GitHub Copilot, Windsurf, Devin, Claude Code, OpenAI Codex, Trae

## PROFESSIONAL EXPERIENCE

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**Aptive Environmental | Senior Full Stack Software Engineer | Remote**

**Feb 2023 - Nov 2025**

Aptive Environmental is a large residential and commercial pest control company operating across multiple US states. Engineering teams build internal and customer-facing platforms supporting field service operations, sales teams, and customer account management.

### **Customer Portal - Multi-Tenant Service Management Platform**

Designed and maintained a secure customer-facing portal for 50K+ customers, enabling service management, payment workflows, and account management.

- Built secure authentication architecture using JWT and HttpOnly cookies with middleware-based route protection for **50K+** customer accounts.
- Designed Backend-for-Frontend (BFF) architecture, improving API interaction reliability.
- Refactored fragmented API clients into centralized Axios interceptors, reducing API-related bugs by **~40%**.
- Standardized typed API responses, reducing integration defects by **~30%**.
- Integrated Stripe billing workflows, supporting automated payments at scale.
- Implemented CI/CD pipelines using GitHub Actions to enable automated build and deployment processes.
- Supported platform used by **50K+ customers** across multiple US service territories.
- Improved system reliability and reduced customer service dependency through self-service tools.
- Deployed applications on AWS (EC2, S3, RDS), designing secure, high-availability systems with encryption, MFA, and network security controls.

### **UI - Enterprise Management Dashboard**

Developed an enterprise internal dashboard consolidating CRM, sales, and operational systems used by internal teams.

- Contributed to the enterprise platform used by thousands of internal users across operations and field teams.
- Built a modular microfrontend, reducing release coupling across **10+** modules.
- Implemented virtualized tables for large operational datasets to improve UI responsiveness by **~40%**.
- Reduced redundant API requests by **~60%** through query caching strategies.
- Integrated Leaflet mapping across multi-state service territories.
- Implemented role-based access control (RBAC) across internal modules for **1K+** internal users.
- Improved dashboard performance during high-concurrency operational workloads.

### **Mobile Sales Application - Offline-First PWA**

Built a Progressive Web Application used by field sales representatives working across multiple territories.

- Designed offline-first architecture using IndexedDB to enable operation in low connectivity areas.
- Implemented service workers and background synchronization, ensuring reliable data syncing.
- Built a conflict resolution system preventing inconsistent offline updates.
- Implemented optimistic UI updates to improve mobile workflow responsiveness.
- Supported **1000+ field sales representatives** across multiple US states.
- Eliminated prior data-loss scenarios caused by unreliable network connectivity.

### **Inside Sales Hub**

Developed an internal sales platform supporting phone-based sales teams and agreement processing.

- Built a platform used by **150+ inside sales representatives** handling high-volume call workflows.
- Implemented lead scoring/routing, improving call efficiency for **150+** reps.
- Integrated Stripe processing for high-volume phone transactions.
- Optimized UI workflows enabling faster agreement creation during sales calls.
- Added automated build and deployment checks in CI/CD to improve release reliability and shorten turnaround for sales-critical workflow updates.
- Built secure API-driven agreement/payment orchestration flows with validation and audit-ready event tracking, reducing failed transactions and manual rework.

## **Admin API - Core Internal Backend Services**

Designed and delivered core backend services powering admin operations, integrations, and tenant-level platform workflows.

- Built production backend services in Go for admin, internal, and CLI-driven operational workflows.
- Integrated critical platform dependencies, including PostgreSQL, S3-compatible storage, identity services, and event/queue-based components for reliable business processing.
- Implemented robust CI with GitHub Actions (build, lint, unit tests with coverage, race checks, and integration tests with service containers).
- Standardized API lifecycle practices by bundling and validating OpenAPI specs as part of the pipeline.
- Automated multi-environment CD pipelines across staging, sandbox, and production with Docker image promotion and controlled rollout gates.
- Deployed to AWS infrastructure using Pulumi with ECS-based production delivery and secure secrets handling.
- Improved release reliability through migration/seed automation, repeatable containerized deployments, and observability integrations.

## **Identity & Access Platform (FusionAuth) - Cloud Infrastructure & Operations**

Owned identity platform infrastructure and release automation for authentication and access services used across applications.

- Managed FusionAuth platform delivery with Infrastructure as Code (Pulumi) and containerized runtime orchestration.
- Provisioned and maintained AWS architecture components, including ECS/Fargate services, Aurora PostgreSQL, IAM, security groups, and private subnet networking.
- Implemented CI/CD pipelines for image build, staging/sandbox deployments, ECR promotion, and production rollout through Pulumi.
- Added pre-deployment Pulumi preview checks in CI to reduce infrastructure change risk before production apply.
- Established production-grade scaling and reliability controls with autoscaling policies, health checks, and CloudWatch alarms.
- Improved security posture through least-privilege IAM patterns, secret management, and controlled environment promotion flows.

## **SDK Platform - Unified TypeScript API SDK**

Built and maintained a shared JavaScript/TypeScript SDK to standardize integration across internal platform services and client applications.

- Designed a typed SDK architecture that unified access to CRM, Sales, Communications, Field Service, Licensing, Pay, Admin, Events, and Automations APIs.
- Implemented code-generation workflows (OpenAPI-driven) and post-processing pipelines to keep SDK clients consistent with backend contract changes.
- Standardized HTTP client behavior (base URL strategy, auth key handling, timeout/config patterns, error normalization) to reduce integration drift across teams.
- Added strong runtime and compile-time safety using TypeScript typings plus validation-oriented patterns for safer API consumption.
- Built automated test suites with Vitest for unit and integration scenarios, including generated test coverage across multiple service modules.
- Implemented CI workflows for scheduled and on-demand integration testing, artifact publishing (JUnit/coverage), and automated quality visibility.
- Automated package publishing through GitHub Actions with controlled versioning (unstable and release flows), improving SDK release cadence and adoption.

## **Better Never Stops | Full Stack Developer | Remote**

**May 2021 - Jan 2023**

Better Never Stops is a digital innovation company building enterprise CRM and operational management systems for B2B clients.

### **Team Simplee - CRM & Warehouse Management Platform**

Developed an enterprise system combining CRM workflows, warehouse management, and customer support.

- Built and shipped an integrated operations platform covering CRM pipeline management, warehouse execution, and customer support in one system.

- Delivered production-ready warehouse workflows for goods-in, goods-out, returns, bookings, and operational tracking with mobile-friendly UX for floor teams.
- Implemented role-based access and secure data boundaries with Supabase policies, improving auditability across 3 operational workflows.
- Deployed frontend and serverless API endpoints on Vercel, including routing rewrites and environment-based builds across 3 release environments.
- Integrated Supabase (PostgreSQL + storage + RPC patterns) to support real-time operational data and scalable schema evolution through migrations.
- Strengthened release quality with automated test coverage (Vitest + Playwright), improving confidence in high-change modules before production rollout.
- Added automated test coverage using Vitest (unit) and Playwright (end-to-end) for high-risk user flows, reducing production regressions during fast release cycles.

### **BNS Project Management - Multi-Module SaaS Operations Platform**

SaaS operations platform for managing projects, pipeline, tasks, messaging, and internal business workflows.

- Rebuilt and modernized a multi-module SaaS platform (CRM, projects, pipeline, messaging, SOPs, onboarding, admin) using Next.js + Supabase.
- Designed tenant-aware and role-sensitive data architecture with RLS-first patterns, enabling secure collaboration across internal teams and clients.
- Implemented GitHub Actions CI gates (lint, type checks, tests, security audit) to enforce quality before merge and reduce regression risk.
- Automated database documentation and schema-sync workflows in CI, improving handover speed and reducing onboarding friction for new engineers.
- Deployed scheduled production automations via Vercel Cron (lead ingestion, campaign dispatch, timesheet reminders), reducing manual ops overhead.
- Integrated external services (GitHub, SendGrid, Twilio, webhook flows) to support end-to-end business automation from intake to outreach.

### **BNS Team Uheat - Internal Team Management System**

Internal management application used to coordinate team operations, users, projects, and day-to-day delivery work.

- Delivered an internal management application using React + TypeScript + Supabase with reusable admin modules for users, projects, and task operations.
- Implemented authentication and RBAC-driven navigation to separate responsibilities across business roles and operational teams.
- Established a reusable frontend architecture (TanStack Query + shared component system) that accelerated feature delivery across follow-on products.
- Standardized deployment with Vercel configuration and SPA rewrite strategy, simplifying release operations across environments.
- Added Supabase-centered data flows and API integration patterns that reduced backend complexity for day-to-day product iteration.
- Improved maintainability through consistent UI conventions and modular feature structure, reducing time-to-change for new requirements.

### **Team AME - Workforce, Compliance & Field Operations Platform**

Workforce and field-operations platform focused on onboarding, compliance, timesheets, and mobile engineer workflows.

- Built a workforce operations platform for engineering teams covering onboarding, project assignment, timesheets, and compliance workflows.
- Implemented dual experience paths (desktop managers vs mobile engineers) with middleware-based role enforcement and secure route access.
- Designed training compliance lifecycle logic (expiry tracking, renewal creation, superseding records, approval flows) to reduce compliance risk.
- Integrated AI-assisted certificate processing with Supabase edge-function patterns to streamline training evidence handling and validation.
- Configured scheduled production reporting jobs on Vercel Cron for recurring compliance notifications and management visibility.
- Added security controls in the delivery pipeline (Gitleaks secret scanning in GitHub Actions) to strengthen release governance.

Worked with international clients building SaaS systems and enterprise applications.

### **Multi-Tenant Restaurant Management System**

Built a SaaS platform supporting POS operations and restaurant management.

- Built real-time order synchronization using Socket.io between POS and kitchen systems.
- Optimized backend queries and indexing to improve order processing performance.
- Reduced order processing latency from **8–12** seconds to **~1–2** seconds.
- Implemented inventory tracking and automated alerts.
- Delivered multi-tenant architecture supporting multiple restaurant locations.

### **School Management Information System**

Developed an education management platform supporting student records and academic workflows.

- Digitized records for **600+** students, replacing manual paper-based systems.
- Built portals for teachers, administrators, parents, and students.
- Implemented automated PDF report card generation.
- Reduced administrative workload by **~50%** through automation.

## **EDUCATION**

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**Angeles University Foundation**  
Bachelor of Science in Computer Science

**Angeles City, Pampanga**  
June 2014 - April 2018