Mike Bros

Software Engineer II

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Summary

Software engineer with 5+ years owning backend systems that process real money. Rebuilt a broken billing workflow into an automated invoicing pipeline handling $155M+ cumulative ($60M+ in 2025 alone) with zero duplicate line items across 82K invoices. Designed idempotent batch processing, dynamic pricing engines, and async-first architecture on a platform serving 342 dealerships and 3,230 users.

Currently leading a Laravel-to-Go microservices migration on GCP using document-driven development. I take ownership of whatever the hardest system in the room is, make it reliable, and hand it off better than I found it.

Experience

Roof Maxx Technologies

Remote — Jun 2020 to Present · 5.5 years

Roof Maxx is a nationwide franchise network selling plant-based roof rejuvenation treatments. I build and own core systems on Roof Maxx Connect (RMC), the platform powering lead routing, corporate invoicing, dealer operations, and compliance across 342 dealerships and 3,230 users. Engineering team ranged from 2 to 10 during my tenure; retained through a 50% layoff.

Software Engineer II — Jun 2024 to Present

- Leading the platform migration from Laravel to Go on GCP with Pub/Sub and Cloud Tasks. Drove document-driven development to produce ADRs for three domains (Stripe payments, QB invoicing, Lead Gen), define service contracts, and establish data ownership boundaries
- Designed technical plans for features built by teammates, including multi-tenant dealer QuickBooks integration and a dealer webhook permission system
- Wrote team quality standards (PR review checklists, testing expectations, code style guides), onboarded developers, screened engineering applicants, and trained support agents. Longest-tenured IC and default escalation point for system questions

Software Engineer I — Apr 2022 to Jun 2024

- Replaced a broken CSV-upload billing workflow with automated invoicing: built OAuth 2.0 from scratch, webhook-driven QuickBooks sync, and self-healing payment reconciliation across two financial systems. Worked directly with the CFO on billing requirements throughout. **$155M+ processed**, 82K invoices with per-line-item failure detection

- Built the lead pricing engine with accounting and operations, determining per-dealer cost-per-lead across billing zones, deal types, and three pricing models. Found a campaign attribution design flaw months before it hit production. **775K+ deals** priced, **373K line items**
- Designed 4-layer idempotent batch processing for weekly dealer invoicing. The TDD test for the exact double-run scenario was written before it happened in production. Accounting ran billing twice on 69 dealers. **Zero duplicates**
- Championed async-first processing for a crash-prone single-server monolith. Built buy-in by delivering 8 specialized queue supervisors incrementally, each justified by a specific production incident. **~20K jobs/day**, zero peak-hour crashes
- Diagnosed a cascading queue failure caused by Horizon's cache tracker consuming unbounded Redis memory (latency spike from **0.5ms to 25,000ms**). Single config change resolved it
- Partnered with business opportunities to build a custom SMS/voice platform with dynamic per-salesperson inboxes, HubSpot-triggered workflows, and opt-in/opt-out compliance — delivered what third-party vendors couldn't. **~1M messages** sent, 380K+/year sustained
- Built PAWS compliance system with tech support and operations — automated policy distribution and read-tracking, then expanded to gate lead ordering and dispute eligibility. **26K+ policy assignments** tracked

Senior Technology Specialist / Software Developer — Jul 2021 to Apr 2022

- Leveraged a year of frontline support experience to redesign the Deal View as a unified, permission-driven interface, replacing separate admin and dealer pages with dynamic component rendering based on user roles — consolidating duplicate views and establishing a scalable UI pattern
- Built a reusable Notes service integrated with the HubSpot Engagements API, enabling full CRUD on notes against any HubSpot object (deals, companies, contacts) — an early internal communication layer for field teams
- Delivered end-to-end dispatch resend capability with appointment time tracking, timezone-aware scheduling, and a dedicated API endpoint — enabling ops to recover failed jobs without manual HubSpot intervention
- Integrated QuickBooks, Armatic, BlueSnap, HubSpot, Katana MRP, and Google Workspace Admin SDK for billing, CRM sync, manufacturing, and user management

Technology Specialist — Jun 2020 to Jul 2021

- Provided tech support for 250+ active dealerships and corporate users
- Overhauled the warranty system into a fully self-service, error-resilient workflow. **68K+ warranties** processed through the improved system
- Created the company Help Center and LMS with training content and onboarding workflows
- Built a dynamic email signature tool used by every employee and dealer organization-wide

Engineering case studies with architecture details and trade-off analysis: mikebros.dev/case-studies

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Projects

Neptune Homelab
Production infrastructure platform

welcome.bros.ninja

- Multi-host XCP-ng cluster with 40 TiB ZFS NAS and 2x40 GbE fabric
- 30+ Docker services with Authentik SSO, Nginx reverse proxy, and Tailscale mesh VPN
- Self-hosted Forgejo (Git), Nextcloud, Vaultwarden, Immich, n8n automation, and monitoring
- Daily-driver infrastructure, not a lab exercise

WGU Capstone — Board Game Rating Prediction

wgu-capstone.bros.ninja

- ML pipeline with scikit-learn comparing Linear Regression vs Random Forest models
- Streamlit web UI with Docker multi-stage build for reproducible deployment

More projects at mikebros.dev

Skills

Languages: PHP, Go, JavaScript/TypeScript, Python, SQL, Bash, HTML/CSS
Backend: Laravel, REST APIs, WebSockets, MySQL, PostgreSQL, Redis, OAuth 2.0
Frontend: Vue.js, React, Inertia.js, Tailwind CSS, Alpine.js
DevOps: Docker, Nginx, Linux Administration, CI/CD, XCP-ng, Tailscale, SSL/TLS
Cloud: GCP (Pub/Sub, Cloud Tasks), AWS (EC2, S3), DigitalOcean, Cloudflare
Practices: TDD, API Design, Microservices, Domain-Driven Design, Async-First Architecture, Git Flow
Business Systems: QuickBooks, HubSpot, Stripe, Twilio, Armatic, Katana MRP

Education & Certifications

B.S. in Computer Science
Western Governors University — 2024

Certifications:

- CompTIA Project+ (2022)
- ITIL Foundation Certificate in IT Service Management (2023)
- HubSpot Service Hub Software (2022)