

Patrick Smith

Thirteen years building backend systems, now designing multi-agent AI frameworks

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📄 Summary

Led architecture, development, and operations for a B2B lead marketplace over thirteen years as sole founding engineer, translating business requirements into four integrated production systems processing \$2.5M annually.

Built backend services, developer tooling, and operational infrastructure that hundreds of partners depended on daily.

Now building multi-agent AI development frameworks and deterministic game simulations, applying the same engineering discipline to new problem domains.

⚙️ Skills

Python PHP
JavaScript SQL
Linux Docker
Git Bash

👜 Experience

Founding Engineer *May 2011 – Sept 2024*
Home Remodel Buddy, San Francisco, CA

- ▶ Led end-to-end system design from loosely defined business requirements through implementation, deployment, and long-term maintenance across four production systems processing \$2.5M annually.
- ▶ Architected lead intake API (PHP) processing several thousand leads per day with sub-250ms response time, implementing two-phase validation (ping/post) with custom HTTP headers for detailed error reporting.
- ▶ Designed multi-objective distribution algorithm balancing revenue optimization, partner retention, geographic coverage, capacity limits, deduplication windows, and buyergroup anti-cannibalization rules across 740+ contractors.
- ▶ Engineered database-driven field mapping DSL enabling non-code configuration of per-partner data translation: field renaming, combining, splitting, and transformation using MOVE/COMBINE/REPLACE actions with priority ordering and object path traversal.
- ▶ Created custom blue-green deployment system using Git and atomic symlink switching, enabling zero-downtime releases and instant rollbacks, and executed a PHP 5.6 to 8.2 upgrade across four systems in two weeks.
- ▶ Implemented monitoring and alerting using Grafana and Prometheus with custom instrumentation tracking server metrics, API response times, and business KPIs.
- ▶ Owned on-call responsibility and incident response over thirteen years, diagnosing issues across application, database, and infrastructure layers.

Media Operations Engineer *Jan 2011 - May 2011*
Quotify Technology Inc. (acquired by Telstra), San Francisco, CA

- ▶ Managed Google Ads campaigns and optimized landing pages, improving conversion from 8% to 12%.

Internet Sales Manager *Mar 2010 - Feb 2011*
Cypress Coast Mazda Subaru, Seaside, CA

- ▶ Managed internet sales department, handling inbound leads from email, web, and third-party providers, closing deals at 3x the national average for internet leads.

Projects

Gridiron Dynasty

- Designed multi-agent AI development framework with specialized Director, Architect, Engineer, and Reviewer agents coordinating parallel work streams with enforced quality gates, file boundary management, and automated escalation triggers.
- Developed deterministic simulation engine in Godot/GDScript with per-thread RNG instances and 83+ unit tests, optimizing bootstrap from 720s to 115s through config extraction, parallel processing, and selective field copying.

Silent Disco LAN Broadcaster

- Built local-network audio streaming system using Docker, FFmpeg, and UDP multicast achieving 50-200ms latency with cross-platform client support and HTTP fallback for WiFi compatibility.

Education

A.S Business/Economics

2005-2007

Gavilan College, Gilroy, CA

Computer Science Coursework

2003-2005

California Polytechnic University, San Luis Obispo, San Luis Obispo, CA