Douglas Lauer

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Professional Summary

A seasoned engineer and entrepreneur with two decades of experience architecting and building high-performance, scalable software systems that solve complex business challenges. My professional journey is defined by a pragmatic approach to technology, a focus on measurable outcomes, and a history of creating platforms that drive significant business growth.

As the technical founder of Veyl, I architected the core platform that scaled the business to **$300M+ in annual revenue**. This microservice-based system successfully handled over **100 million daily users** and processed more than **10,000 events per second** at its peak. This robust foundation, validated by an analysis of my **277 GitHub repositories** and **11,000+ contributions**, underscores a career dedicated to building reliable, efficient, and impactful technology from first principles.

Core Competencies

- **Systems Architecture:** Distributed & Event-Driven Systems, High-Scale & High-Availability Deployment, Microservice & Serverless Patterns.
- **Performance Engineering:** Marketing & E-commerce Optimization, High-Throughput Data Pipelines, Load Balancing, Bottleneck Analysis.
- **Data & Infrastructure:** Data Security & Vaulting, PCI-Compliant Payment Systems, Data Warehousing (Redshift), Caching (Redis), Cloud (AWS), Infrastructure as Code (Docker).
- **Blockchain & Cryptography:** Bitcoin Core & Lightning Network Integration, Proof-of-Work Fundamentals, EVM Smart Contracts, p2p Networking.
- **Strategy & Leadership:** Pragmatic Problem-Solving, Automation & Process Optimization, LLM Integration & Workflow Design, Technical Roadmapping.

Professional Experience

Founder, VP of Technology @ **Veyl Ventures** (2012 – 2024) I co-founded and led the technology division, architecting a proprietary platform that was the cornerstone of the company's growth from a bootstrapped startup to a nine-figure enterprise.

- Architected a high-throughput, event-driven microservice platform that served as the central nervous system for all business operations, enabling massive scale and detailed, retroactive reporting.
- Engineered a custom e-commerce and subscription billing engine managing hundreds of thousands of active plans, which consistently outperformed Shopify in head-to-head split tests on conversion rate and customer acquisition cost.
- Designed and implemented the marketing technology stack that profitably scaled advertising spend to over **$100,000 per day** across diverse channels like Facebook, Google, and YouTube.

- Built and secured PCI-compliant payment processing systems, complete with data vaulting and intelligent load balancing to optimize transaction success rates and minimize costs.
- Successfully launched and scaled multiple direct-to-consumer brands, including collaborations with notable figures such as Steve Harvey and Drew Barrymore, and expanded product lines into major retailers like Walmart and Whole Foods.

Technical Lead @ Ultra16 (2008 – 2012) Led development teams in building enterprise software and large-scale user acquisition systems for clients including American Express and various government agencies.

Technical Expertise

- **Languages: Node.js**, **Rust**, **Python**, Ruby, Go, PHP, CoffeeScript, C/C++, Solidity/Vyper, SQL
- **Databases: PostgreSQL**, **MongoDB**, **Redis**, Redshift, MySQL, LevelDB
- **Cloud & DevOps: AWS Ecosystem** (EC2, S3, Lambda, CloudFront, Bedrock), **Docker**, Serverless Architecture, Nginx, CI/CD
- **Key Frameworks:** React (Next.js), Express.js, Django, Rails
- **Specialties:** Distributed Systems, Event-Driven Architecture, High-Performance Computing, Cryptography, LLM Tooling

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Engineering Highlights & Philosophy

My engineering philosophy is to build for scale from day one while retaining the ability to ship fast. I choose higher-level abstractions unless performance dictates a low-level solution, ensuring that engineering effort translates directly to business value. The following systems are prime examples of this philosophy in practice.

Architecture Case Study: Full-Stack E-commerce & CRM Platform

- **Objective:** Build a proprietary, high-performance e-commerce platform from the ground up to outperform off-the-shelf solutions like Shopify in a high-volume, direct-to-consumer environment.
- **System Design:** Architected a comprehensive "Video Sales Letter" (VSL) serving, tracking, and CRM stack. The system was a polyglot microservice environment using **PHP**, **Node.js (CoffeeScript)**, and **Hack** for its core services. It leveraged **MongoDB** for persistence, **Redis** and **Memcached** for caching and job queuing, and a finely-tuned **Nginx** layer for traffic management and video delivery.
- **Outcome:** This platform became the engine of a nine-figure business, successfully managing the entire customer lifecycle from initial ad impression to purchase and recurring subscription billing. It consistently beat industry-standard platforms in A/B tests on conversion rate and customer acquisition cost, proving the value of a bespoke, performance-oriented architecture.

Architecture Case Study: High-Frequency Ad Tech System

- **Objective:** Develop a robust marketing technology stack capable of profitably managing over **$100,000 in daily ad spend** across numerous channels, primarily Facebook.

- **System Design:** Created a high-throughput system for campaign management, creative generation, and performance tracking. The architecture featured a sophisticated **Nginx** proxy and load-balancing layer to handle immense traffic, distributing requests across a pool of Node.js API workers. It included real-time event aggregation and detailed analytics to provide immediate feedback on campaign performance.
- **Outcome:** This system provided a critical competitive advantage, enabling the company to scale its advertising efforts massively and efficiently. It allowed for rapid iteration and optimization of ad creatives and funnels, which was fundamental to the company's customer acquisition strategy and growth.

Foundational R&D: Blockchain from First Principles

- Demonstrated a deep, fundamental understanding of blockchain by building multiple Proof-of-Work chains from scratch in Node.js and Rust. This work included implementing p2p node discovery with libp2p and exploring various database backends, showcasing the ability to deconstruct and rebuild complex technologies from the ground up.

Current Endeavors & Interests

I am currently architecting a document intelligence platform for the legal industry, leveraging a multi-tiered LLM and RAG architecture to transform unstructured legal documents into analyzable, structured data.

My enduring passion is for Bitcoin and the promise of decentralized, privacy-focused technologies. As an early Bitcoiner (pre-2017) and a member of Facebook's White Hat Hacker's list, I have a deep appreciation for applied cryptography and the elegant design of secure systems. I am actively seeking to apply my extensive experience in building scalable, robust systems to challenges and opportunities within the Bitcoin ecosystem.