

Jason Michael Wergin

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SUMMARY

Software architect and engineer with 30+ years designing, building, and leading distributed systems. Deep expertise in C#/.NET and modern TypeScript/Node/React on cloud-native platforms (GCP, Azure).

Specialties: distributed and event-driven architecture, microservices, API and platform design, domain-driven design, and AI-native development. Hands-on architect who still ships production code, with a long record of mentoring engineers and setting engineering standards across teams.

SKILLS

Languages & Frameworks: C#, .NET / .NET Core, TypeScript, Node.js, Next.js, React, JavaScript, SQL, Java, C++

Architecture: Distributed Systems, Microservices, Event-Driven Architecture, Pub/Sub, Domain-Driven Design (DDD), CQRS, API / Platform Design, Design Patterns, SOLID, Multi-tenancy, Anti-Corruption Layer

Cloud & DevOps: Google Cloud Platform (GCP), Cloud Run, Azure, Docker, Kubernetes concepts, CI/CD, GitLab, GitHub, Terraform concepts

Data: PostgreSQL, SQL Server, MongoDB, MySQL, MariaDB, Neo4j, Entity Framework, Dapper

AI: AI-native / constrained-AI development, Anthropic API, prompt engineering, LLM application architecture

Practices: Scrum / Agile, code review, mentoring, technical leadership, testing automation

PROFESSIONAL EXPERIENCE

Senior Lead Engineer, Metrc, LLC — Lakeland, FL

July 2023 to Present

- Lead engineer on a regulated seed-to-sale cannabis-tracking platform (C#/.NET, React, Angular, SQL Server, MongoDB, Neo4j) used for government compliance and supply-chain traceability — driving architecture and code quality across my team.

- Re-modeled a 3TB package-traceability dataset — multi-layered harvest and repackage lineage — from Azure SQL Server into Neo4j, replacing slow recursive SQL traversal with graph queries better suited to the hierarchical relationships.
- Own high-level software design, the code-release strategy, and code-quality standards across the team, and manage the Scrum process and task assignment.

Senior Engineer, Metrc, LLC — Lakeland, FL

March 2023 to July 2023

- Integrated Tableau reporting into the platform, giving state regulators deeper visibility into the businesses they oversee.

Architect & Founder, Ticket Dawg, LLC — Birmingham, AL

April 2021 to Present

- Founded and run a revenue-generating software company with a business partner — owning architecture, product direction, client delivery, and budget across a growing suite of production applications and shared microservices serving multiple paying clients.
- Work AI-native: haven't hand-written code in six months — architecture documentation as the prompt, output correct by construction.
- Built a fully decoupled, event-driven Pub/Sub architecture with recursive provider routing and health-based trust scoring (hot/warm failover mesh, "fast to distrust, slow to re-trust") — swapped email providers mid-peak-season in 10 minutes via ACL-based interfaces with zero downtime.
- Created the Blanket Pattern — a composition pattern that cut API endpoint boilerplate from 40 lines to 8 and enforced consistent handler architecture across the entire codebase.
- Architected a multi-tenant event-commerce platform (TypeScript/Node, Next.js, React, PostgreSQL, GCP Cloud Run) — 100,000+ tickets sold and redeemed for live events, sustaining ~5 orders/minute at seasonal peak with sales and live gate-redemption running concurrently.
- Designed a Constructive CTE query architecture holding every query under 80ms at peak — ran the whole season on the smallest database tier with no performance issues.
- Built a multi-tenant billing microservice with a hash-chained, tamper-evident audit ledger — invoicing, metered usage, subscriptions, refunds, and a QuickBooks accounting mirror with durable retry and reconciliation.

Senior Engineer, BLOX, Inc. — Bessemer, AL

July 2021 to March 2023

- Set up our initial CI/CD process inside of Gitlab.

- Built the initial containerization process of our applications.
- Built and represented our design, manufacture, and construct BOMs in a complex Neo4j graph.

Architect & Founder, jasonwergin.com — Birmingham, AL

August 2022 to Present

- Shipped a production LLM feature end-to-end: ACL-isolated provider, structured outputs, prompt-cached context, and an honesty-calibrated scoring rubric tuned against real job postings.

Architect, [ibml](http://ibml.com) — Birmingham, AL

June 2018 to July 2021

- Designed, led the development of, and released a framework for quickly building new applications — streamlining new application development well into the future.
- Led a weekly meeting allowing developers to learn new design strategies. This allowed for consistent implementation of our architecture and software guidelines.
- Applied Domain-Driven Design to [ibml](http://ibml.com)'s modular document scanners — a C# domain model that composed itself at runtime from the modules the C++ control layer reported, then drove and diagnosed the physical machine through repository-backed drivers with a loose CQRS split between reads and writes.

SELECTED EARLIER EXPERIENCE

A full historical résumé can be found at jasonwergin.com

Senior Engineer, [DST, Inc.](http://DST.com) — Birmingham, AL

July 2016 to May 2018

- Modernized a physician-facing healthcare application (legacy ASP → Backbone/Web API) that let providers monitor their MIPS and Medicare Star Ratings — the quality scores that drive reimbursement.
- Built an application enabling users to register for insurance.
- Mentored the development team in C#, JavaScript, Backbone, and .NET.

Architect, [White Plume Technologies](http://WhitePlume.com) — Birmingham, AL

October 2007 to March 2011

- Could have adopted the first release of Windows Workflow Foundation (WWF), but it lacked the pluggability we needed — so I hand-wrote our own event-driven workflow engine in about three months, using the same fan-in/fan-out pipeline and activity model WWF would only mature into roughly a year later.
- Brought the Microsoft Solutions Framework to the company in the summer of 2007.

- Started and led Cornerstone, a weekly architecture meeting where the development team collaborated about design, architecture and architectural decisions about the advancement of our products. This meeting was successful in providing cross product knowledge - which White Plume had not had before.
- After the introduction of the Microsoft Solutions Framework and Cornerstone meetings I was awarded the President's Award. Which is an annual award, given by the president of the company, for efforts that are above and beyond expectations. In his presentation he stated that I 'single handedly changed how White Plume does business'.

Architect, National Computer Print, Inc. — Birmingham, AL

April 2003 to April 2004

- Designed the migration of 800+ applications off the mainframe — projected at nine months, delivered in eight.
- Built a self-updating, web-deployed client that pulled down only the application packages a user's database security grants allowed — so staff ran the same apps identically from home or office. This beat mainstream ClickOnce-style deployment by three to four years.
- Architected a network-aware data layer on .NET 1.1: it queried SQL Server directly when local, or transparently proxied through a web service returning XML when remote — calling code never knew which path it took. Predated WCF and occasionally-connected smart-client patterns by years.
- Designed a dynamic, role-driven application browser covering the entire enterprise (shop floor, HR, customer service, mail room) — composing each user's available components at runtime from their permissions, using MVC, DTO, MSMQ, dynamic host discovery, and workflow.
- Drove all identity and authorization from the database with role- and column-level security — adding a SQL Server user provisioned them into the system, no separate user administration.
- Built to last: nearly twenty years later the system was still in production, much of it still the original code.

Scan Optics Inc., Pinpoint Computing, Inc. — Birmingham, AL

October 1999 to March 2000

- Single-handedly salvaged a \$3 million project after the customer had already threatened to cancel — a complete redesign and reimplementaion. After changing timeline expectations, it was completed on time and on schedule.

EDUCATION

M.Eng. in Information Engineering and Management, University of Alabama at Birmingham, May 2013

B.S. in Computer Science (Minor: Mathematics), Jacksonville State University, December 1994

CERTIFICATIONS

Design Guidelines and Patterns for Microservices — SEI, March 2024

Documenting Software Architectures — SEI, March 2024

Software Architecture Principles and Practices — SEI, December 2023

PUBLICATIONS

Author of technical articles on software architecture, engineering patterns, and AI-native development at <https://jasonwergin.com/solutions>