
Blake Crawford

Knoxville, TN • [linkedin.com/in/blakejcrawford](https://www.linkedin.com/in/blakejcrawford)

Technology Executive • Fractional CTO/CIO • AI, ML & Data Science

Hands-on technology executive with 20+ years turning hard technical problems into shipped products and measurable business results. I pair deep engineering and data-science expertise with enterprise architecture and operations to build AI/ML systems, modernize platforms, and lead teams that deliver on time and on budget. Founders and boards trust me to move fast, cut cost, and drive durable change in high-growth organizations.

WORK EXPERIENCE

Fusion Collective • New Jersey

Jan 2024 – Present

Boutique firm specializing in fractional executive leadership, AI/ML product development, and M&A.

Partner & Chief Technology Officer

- Built and lead the firm's AI/ML product portfolio, taking three enterprise products from concept to market launch.
- **Fusion Sentinel** — architected an AI observability platform that detects model drift in real time across ChatGPT, Claude, and Gemini; flagged measurable drift in 90% of models tested and maps to EU AI Act and ISO 42001 compliance.
- **Sentinel Citation** — created a patent-pending legal-AI system running three competing LLMs plus a meta-judge to verify case citations against CourtListener, Cornell LII, and the eCFR — addressing 1,400+ documented AI-hallucination matters and six-figure court sanctions.
- **F3C** — delivered a radio-frequency management platform for major events and venues that cuts FCC data access from days to minutes, with a headless API and visualization tooling.
- Saved one client \$16.5M/year through business-process optimization, time-series forecasting, and mixed-integer optimization.
- Designed a job-shop scheduling optimization system to balance personnel demand in large, regulated call centers.
- Advised multiple M&A clients on separation and divestiture planning and execution.

The Alementary • New York City Metro Area

Apr 2016 – Jan 2024

Contract beverage manufacturer and co-packer specializing in emerging brands.

Chief Technology Officer

- Forged strategic partnerships that cut product cycle times by two days and drove a 300% increase in production capacity (2020).
- Reduced operating costs 20% in one year via process-driven financial analysis, improving procurement and margins.
- Raised production efficiency and product quality by applying Lean/Kaizen and novel data-science techniques.
- Built BL1, an open-source lean-manufacturing and brewery operations platform, leading digital transformation and applying machine learning to improve performance and data compliance.

Viacom • New York, NY

Nov 2013 – Apr 2017

Vice President, Enterprise Architecture

- Authored the OATC Metadata 2.0 specification and represented the company to industry standards bodies (OATC, EIDR, SCTE) on metadata schema and in-band reconciliation.
- Drove adoption of ITIL and TOGAF, increasing project efficiency 15% and aligning delivery to business goals.
- Led a cross-functional team to revamp the content supply chain from ingest to player for seamless streaming and content reuse.
- Set product strategy to make key components cloud-ready (AWS, Google), reducing cost of change over time.

MTV Networks • New York, NY

Jul 2004 – Nov 2013

Sr. Director, Application Architecture

- Redesigned the global digital asset library and metadata schema, improving searchability and reuse and cutting costs >\$5M in one year.
- Evaluated and introduced emerging technologies into the infrastructure to raise efficiency.

- Reduced cost of change by developing reference architectures and best practices that guided product roadmaps.

Director, Ad Sales Applications Development

- Led development and product releases across the Ad Sales portfolio: planning, traffic, optimization, and billing.
- Directed the broadcast technology stack managing \$1B+ in annual billings.
- Managed a \$10M+ budget, coordinating vendors and in-house development.

Director, Affiliate Sales Applications Development

- Created the OASIS operations and support team for the Affiliate Sales application portfolio.
- Established release-management, source-control, and defect-management practices.
- Designed a Data Quality Dashboard as an early-warning system for the business teams.

Developer, Affiliate Sales Systems

- Migrated mtvn.com to ATG 6.4 and converted aging XML datastores to RDBMS, paving the way for a full rewrite.

ATG • Cambridge, MA

Jul 2000 – Jul 2004

Lead Instructor & Professional Services Consultant

- Guided 50+ industry-leading organizations through project lifecycles, increasing customer success.
- Expert in J2EE architecture, high-performance Java, personalization, and scenario-driven application design.

EDUCATION

M.S., Chemical Engineering • University of Arkansas

1992 – 1999

Research in mathematical modeling and prediction of biological systems with an emphasis on large-scale computational mathematics.
Thesis: Breakthrough Characteristics of Immobilized Metal Affinity Membrane Chromatography Media.

AWARDS

Technical Emmy • National Academy of Television Arts & Sciences

Apr 2022

SKILLS

AI/ML & Data Science • AI Observability & Governance • Machine Learning • Time-Series Forecasting • Mathematical Optimization (Mixed-Integer) • Enterprise Architecture • Cloud (AWS, Google) • SaaS • Software Development & Architecture • Data Analysis & Business Intelligence • Process & Operations Optimization • Product Management • Agile / Scrum / SDLC • IT Strategy • M&A and Divestiture • Strategic Planning