

I have 25+ years of experience as a human full stack architect/engineer with a primary focus on backend and systems implementation, security, and systems and interface usability. I participate in and lead development, strategy, architecture, client & vendor relations, project management in a variety of roles as needed. I have some business development and management experience including P&L responsibility. I have worked in several key vertical markets including social media intelligence, e-commerce, non-profit, marketing, publishing, and education.

Selected Links

- <https://fields.medium.com/my-principles-of-work-263c7d784d28> (*Principles of Work*)
- <https://www.adamfields.com> (*Work/Personal*)
- <https://www.counter.kitchen> (*Food Writing*)

Summary of Skills and Experience

- Technical leadership and business development for advanced web based and supporting backend/data processing systems with workflow, personalization, data storage, and content management across various enterprise development platforms and languages.
- Expert understanding of real-world software delivery and content management issues, focusing on scaling, usability, personalization, caching, web optimization, and privacy.
- Proven success managing teams of developers through on-time and exposure-managed project completion.
- Comfort with implementing green field infrastructure management from development to production with Terraform, Ansible, Pulumi, Packer, Docker, and related technologies.
- Experience with SOC2 certification process and compliance automation.

I bring leadership in all phases of the software development lifecycle, including aggressive requirements analysis, technical architecture and specification (design and writing), team leading, project management, technical communication, and scalability/performance analysis.

- Career highlights for architecting, deploying, managing, and troubleshooting large scale web and distributed applications have included content management systems used by 1500+ worldwide editors, a media portal with 100,000+ registered users serving 25GB+ traffic per day (in 2004), an e-commerce site with \$4 million+ in monthly revenue, and a distributed web/twitter spidering and parsing architecture handling billions of pages across terabytes of distributed storage.
- Independently spearheaded multiple complete technology overhauls to meet changing business requirements and accommodate new technological capabilities over time, starting from servers hosted in a basement through to colo-hosting to AWS migration to EC2 instances to containerized services, with corresponding changes in infrastructure management from individual assets to a pulumi-managed fleet, setting standards to allow development teams autonomy to manage their own infrastructure needs.
- Expertise in general performance optimization and enterprise scaling. Experience with many development stacks over the years including Ruby/Rails, Python, MongoDB, MySQL, PostgreSQL, Redis, AWS data storage (DynamoDB, S3, OpenSearch, etc..). Experience with search proxies, HA/replication/sharding, queue servers, and memcached. Strong experience with queue-based processing

infrastructures and handling scheduling/reporting issues. Experience with log aggregation in a distributed context with observability, metrics collection, and eventing alerts (DataDog, logz.io, CloudWatch)

- Supported infrastructure for ML data pipeline collection.
- Experience with deploying automated CI/CD deployments utilizing Jenkins and GitHub Actions.
- Broad experience with free and open source technologies and licensing issues, as well as commercial/closed source offerings.
- Deep experience with elegant API design and application design utilizing internal APIs.
- Repeated successes with constructing highly usable tools that fit actual needs and remain in production for years after implementation. That “temporary fix” that’s still chugging away doing what it needs to 10 years later with no supervision? I did that.
- Comfort with data storage design and implementation including SQL, noSQL, object storage, fulltext search, caching, and in-memory databases.
- Willingness to follow or set methodology for a development team, as needed. Comfort with waterfall, spiral, and agile (XP, scrum, etc...) development methodologies with various levels of formality.
- Content management experience predating the existence of the formal CMS market (designing and implementing completely custom CMS deployments), plus experience with enterprise CMS. I wrote the sample application that shipped with Vignette V5.
- Extensive experience with AWS including Greenfield VPC and network configuration for security and isolation, EC2, ECS, SQS, and S3 usage and administration, as well as AWS cost reduction and mystery solving.
- Some experience with supporting, deploying, and troubleshooting Kubernetes clusters.
- Identified the need for, advocated for, organized, and led the company transition to Pulumi from Terraform. Wrote, tested, and deployed Pulumi extensions and code standards to support multiple AWS accounts in a single stack, eliminating the need for per-account infrastructure duplication across the organization.
- Hands-on experience with Unix/OS X system administration, network topology design and configuration, load balancing configurations, and protocol-level application and network interaction design. Fluent and comfortable with mixed-OS environments, but I prefer not to work with Windows if possible.
- Experience with automation platforms (including vendor selection) and implementing SecureFrame to define and track controls for SOC2 compliance.
- Independently developed security standards for the entire company, wrote and presented individual security training for all employees.

Professional Experience

For over ten years I have primarily focused on building Graphika, which has grown into a respected name in the social media analysis space. In my career, I’ve started a few companies, worked for a few companies, and been a consultant at a bunch of others.

Graphika Technologies, Inc. (formerly Morningside Analytics, 2008-Present)

Co-Founder, Chief Engineer for Security & Infrastructure

As senior technical co-founder, I oversaw technical and process infrastructure in a number of roles, helping to organically grow the company from zero employees to over 60. I addressed substantial challenges of both organizational and technological growth including data processing of millions of social media posts per day, supporting custom analytics and ML pipelines, API development, and application/usability design to serve clients in diverse industries including government, election integrity, social media, finance, and corporate risk management. I have performed many functions over the years including backend development, technical architecture, data storage design and implementation, IT support, security, leadership, and developer and employee relations. I have played an active role in championing increased communication and transparency across the entire organization, including introduction of skiplevel 1:1s and regular leadership roundtables to drive communication improvements across disparate teams facing the challenges of remote development. I led the preparedness initiative for SOC2 Type 2 certification, including drafting a comprehensive set of organizational policies, hardening of legacy infrastructure, and cross-functional security compliance. I led the entire annual penetration testing effort from vendor selection through test configuration to understanding and remediation of issues to achieve an A+ rating from a CREST-certified pentest vendor.

Other Relevant Professional Experience

I have worked with tiny startups and huge companies, including notable projects for The National Cancer Institute, iWon.com, John Wiley & Sons, Fannie Mae, The Open Society Institute, Atkins Nutritionals, Yahoo!, and GOOD Magazine.

Education

Master of Science (Computer Science), Columbia University, SEAS
Bachelor of Arts, Columbia University, Columbia College

Interests and Accolades

I am an accomplished semi-amateur photographer and chef. I naturally gravitate to and cultivate online communities. I regularly blog about what I'm cooking and manage/lead several active cooking communities including a Facebook sous vide group with over 10k members. I earned a black belt in Kenshikai Karate in 2025.