.Fielding.

Senior Software Engineer with AI and Systems Expertise

fielding@justfielding.com
justfielding.com
(479)461-1996
github.com/fielding
linkedin.com/in/fieldingjohnston

A versatile full-stack software engineer with 15+ years of experience building scalable AI infrastructure, distributed systems, and healthcare platforms. Currently building a greenfield patient communications platform at Freed, selected as the company's top strategic bet. Previously architected a distributed inference framework for 120k models handling 2M daily requests and a layer 1 blockchain at Nesa. Passionate about AI adoption, from engineering culture initiatives to production AI systems.

.Professional Experience.

Senior Software Engineer

Freed | 2025 – Present

- Founding member of a 4-person team that built a greenfield patient communications platform; selected as the company's top strategic bet and scaled to a larger team.
- Built end-to-end voice and SMS infrastructure including patient identification with dual validation, AI-initiated call transfer, two-way SMS with TCPA-compliant consent, and PHI screening via LLM.
- Shipped BigQuery analytics pipeline as source of truth for pilot metrics, integrating sentiment analysis and call evaluation criteria, and fixing duration reporting accuracy from 0% to 100%.
- Designed care collaboration workflows with PostgreSQL RLS and role-based access, enabling multi-clinician visit collaboration with realtime patient updates.
- Created and shipped '12 Business Days of AI,' a 12-day internal engineering campaign with guest contributors teaching advanced AI patterns, shifting the team from shadow AI usage to documented shared mastery.

TypeScript | React | Supabase | PostgreSQL | Twilio | ElevenLabs | OpenAI Realtime | BigQuery | tRPC | GraphQL | GKE | Playwright | GitHub Actions

Vice President of Engineering

Nesa | 2023 – 2025

- Architected a distributed inference framework for 120,000 models across heterogeneous hardware, handling up to 2M inference requests in a single day.
- Designed and implemented Nesa's layer 1 blockchain, enabling decentralized compute for AI workloads.
- Developed telemetry pipeline using NATS.io and Prometheus to monitor thousands of nodes.
- Led secure containerization for user-submitted models.
- Contributed to equivariant encryption (EE) for end-to-end private AI inference with zero-latency overhead.
- Developed reinforcement learning system for dynamic model assignment.
- Contributed to open-source projects including xFusers and nats.py.

Python | CUDA | NATS.io | Prometheus | Docker | blockchain | distributed systems | PyTorch | LLMs | Hugging Face | TypeScript | Git | Linux

Lead Software Engineer & Director of Design and Development

OpesSky | 2022 – 2023

- Led Unity-based lunar colony simulation game development.
- Designed and implemented 3D environments and shaders.
- Built AI systems for dynamic NPCs with procedural behaviors.
- Directed art team and coordinated UI/UX integration.

Unity C# 3D programming GLSL AI game design JavaScript

Lead & Senior Frontend Engineer

Vidy | 2019 – 2022

- Refactored codebase to Svelte, improving performance for 14M+ monthly users.
- Developed custodial wallet system for user transactions.
- Implemented NLP for ad placement to boost engagement.
- Engineered fine-grained reactive vanilla JS framework.

JavaScript Svelte TypeScript React HTML CSS NLP

Founder and Software Engineer

justFielding | 2009 – 2019

- Built and scaled web apps integrating React and Three.js.
- Advocated open-source frameworks to reduce tech debt.
- Managed technical, design, and business operations.

JavaScript React Three.js Node.js C++ Nginx Redis Docker

.Publications.

Meta-Learning for Speeding Up Large Model Inference in Decentralized Environments

Y. Du, Z. Wang, A. Farhan, F. Johnston, et al.. COLM 2025. arXiv:2410.21340

Encrypted Large Model Inference: The Equivariant Encryption Paradigm

J. Buban, H. Zhang, C. Angione, F. Johnston, et al.. arXiv preprint, 2025. arXiv:2502.01013

Model Agnostic Hybrid Sharding for Heterogeneous Distributed Inference

C. Angione, Y. Zhao, H. Yang, F. Johnston, et al.. MLforSys2024. arXiv:2407.19775

Towards Secure and Private AI: A Framework for Decentralized Inference

H. Zhang, Y. Zhao, C. Yang, F. Johnston, et al.. NeurIPS 2024 Workshop RBFM. arXiv:2407.19401