.Fielding.

Senior Software Engineer with AI and Systems Expertise

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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.
- Contributed to equivariant encryption (EE) for end-to-end private AI inference with zero-latency overhead (arXiv:2407.19775).
- 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

OpesSky | 2022 – 2023

- Led development of a Unity-based lunar colony simulation, implementing 3D environments, shaders, and AI-driven NPC systems.
- Directed art team and coordinated UI/UX integration across the project.

Unity C# 3D programming GLSL AI game design JavaScript

Lead Frontend Engineer / Senior Software Engineer

Vidy | 2019 – 2022

- Refactored codebase to Svelte, improving performance for a product with 14M unique monthly visitors.
- Built custodial wallet system and implemented NLP-based ad placement to boost engagement.

JavaScript Svelte TypeScript React HTML CSS NLP

Founder and Software Engineer

justFielding | 2009 – 2019

- Built and scaled web applications for clients using React, Three.js, and Node.js.
- Managed technical, design, and business operations across 10 years of freelance work.

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