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      (ASCII art logo: .FIELDING.)
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FIELDING JOHNSTON
Senior Software Engineer with AI and Systems Expertise

CONTACT

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PROFILE

A versatile full-stack software engineer with 15+ years of experience
building scalable AI infrastructure, distributed systems, and interactive
applications. Led development of a 120k-model inference framework handling
2M requests in a single day and a layer 1 blockchain at Nesa. Developed
AI-driven NPC systems for a Unity-based game. Contributor to open source
projects like xFusers and nats.py. Passionate about democratizing AI through
scalable, decentralized solutions.

EXPERIENCE

[2023-Present] NESA
Vice President of Engineering

• Architected a distributed inference framework for 120,000 models,
  handling up to 2M requests per day on heterogeneous hardware.
• Designed and implemented Nesa's layer 1 blockchain for decentralized AI compute.
• Built telemetry pipeline using NATS.io and Prometheus to monitor nodes.
• Led secure containerization for user-submitted models.
• Contributed to equivariant encryption (EE) achieving zero-latency private inference.
• Developed reinforcement learning system for dynamic model assignment.
• Contributed to open-source: xFusers and nats.py stability improvements.

Skills: Python, CUDA, NATS.io, Prometheus, Docker, blockchain, distributed systems,
tensor/sequence parallelism, PyTorch, LangChain, LLMs, Hugging Face, RLHF,
TypeScript, Bash, Git, Linux

[2022-2023] OPESSKY
Lead Software Engineer & Director of Design and Development

• 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.

Skills: Unity, C#, 3D programming, shader programming (GLSL), AI (NPC behavior),
game design, JavaScript, project leadership

[2020-2022] VIDY
Lead Frontend Engineer (2020-2022)

• Refactored to Svelte, improving performance for 14M+ monthly users.
• Built components for scalable real-time video and data applications.
• Developed custodial wallet system for user transactions.
• Implemented NLP for ad placement to boost engagement.

Senior Software Engineer (2019-2020)

• Built scalable APIs and web apps for real-time video.
• Led adoption of modern JS frameworks.
• Engineered fine-grained reactive vanilla JS framework.

Skills: JavaScript (ESNext), Svelte, TypeScript, React, HTML, CSS,
Rollup, PostCSS, Git, API development, NLP

[2009-2019] JUSTFIELDING
Founder and Software Engineer

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

Skills: JavaScript (ESNext), React, Three.js, RxJS, HTML, CSS, Webpack,
Node.js, C++, Nginx, Redis, Git, Docker

PUBLICATIONS

• Meta-Learning for Speeding Up Large Model Inference in Decentralized Environments
  Du, Y., Wang, Z., Farhan, A., Johnston, F., et al. (2025)
  COLM 2025
  arXiv:2410.21340

• Encrypted Large Model Inference: The Equivariant Encryption Paradigm
  Buban, J., Zhang, H., Angione, C., Johnston, F., et al. (2025)
  arXiv preprint
  arXiv:2502.01013

• Model Agnostic Hybrid Sharding for Heterogeneous Distributed Inference
  Angione, C., Zhao, Y., Yang, H., Johnston, F., et al. (2024)
  MLforSys2024
  arXiv:2407.19775

• Towards Secure and Private AI:
  A Framework for Decentralized Inference
  Zhang, H., Zhao, Y., Yang, C., Johnston, F., et al. (2024)
  NeurIPS 2024 Workshop RBFM
  arXiv:2407.19401

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