

Kenneth Harper

Chief Engineering Officer

Experience Highlights

Kenneth Harper is a veteran technology leader with over 25 years of experience in advanced systems architecture, AI/ML engineering, and multichain blockchain development. As Chief Engineer Officer at Autheo, he has architected a quantum-safe, AI-integrated Layer-1 blockchain leveraging Cosmos SDK, tuple-based data structures, and high-throughput modular nodes to support real-time financial and autonomous agent systems. Kenneth's innovations span Zero Knowledge Proofs, Decentralized Identity, dynamic on/off-chain dimensional data models, and privacy-preserving AI. He is the lead author of "Modernizing Blockchain Structures for Quantum-Safe Cryptography and AI-Driven Web4", a research paper introducing tuple expansion and dimensional chaining as foundations for secure Web4 applications. Kenneth's multichain experience includes Cosmos, Polkadot, Avalanche, and EVMs, with deep implementation of IBC, sidechains, state channels, zk-rollups, and decentralized compute frameworks such as IPFS, iExec, and Golem.

In enterprise settings, Kenneth has led large-scale engineering teams and built decentralized platforms across healthcare, finance, and retail sectors. At Datalink and EY, he pioneered next-gen data platforms secured by blockchain observability pipelines, integrating Federated Learning, Differential Privacy, and decentralized governance to protect PHI and enterprise analytics. His Web3 systems enable edge computing for IoT, decentralized microservices using GraphQL/SparQL APIs, and full-stack architectures with serverless compute on Knative and OpenWhisk. Kenneth has successfully scaled engineering teams using AI agents, delivered exabyte-scale data ingestion pipelines, and led AI product development combining LLM, OCR, and RAG for intelligent enterprise automation. His work bridges deep Web2 architecture with sovereign Web3 systems, positioning him as a key innovator in the convergence of data, cryptography, and decentralized compute.

Core Expertise

Blockchain-based data architectures, multichain and modular Layer-1 systems, Zero Knowledge Proofs, decentralized identity, AI/ML integration, privacy-preserving compute, observability pipelines, and data governance for secure enterprise and Web3 ecosystems.

Education

Bachelor of Science in Electrical Engineering from the University of South Carolina, with minors in Computer Engineering, Mechanical Engineering, Physics, Mathematics, and Spanish. He also holds certifications in ScrumMaster and Product Ownership, and completed Arabic and Middle Eastern language studies at the Defense Language Institute.