

# KEERTHI NELATURU

Engineering Lead · Blockchain & Digital Assets · Systems Architect

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## PROFESSIONAL SUMMARY

Blockchain engineering leader with 16+ years delivering complex technology projects in regulated financial environments. Built production payment systems on private Ethereum, led engineering strategy for a 10,000+ TPS cloud-native settlement platform at the Bank of International Settlements, and conducted CBDC research at the Bank of Canada. Proven track record coaching cross-functional teams, managing vendor solutions, and delivering within structured SDLC and governance frameworks. PhD in Computer Engineering (University of Toronto) with published research on smart contract verification.

## CORE COMPETENCIES

Blockchain & DLT Architecture, Smart Contracts (Solidity/Move), Digital Currency & CBDC, API & Microservice Design, Team Coaching & Mentoring, Regulated Environment Delivery, Cross-Functional Stakeholder Management, Risk & Compliance Alignment, Vendor Management & SDLC

## PROFESSIONAL EXPERIENCE

### Senior Software Engineer | Trestle

Jan 2026 — Present

Building TrestleAI — an AI-powered construction intelligence platform with document intelligence and integration infrastructure.

- Owning Document Intelligence (AWS Textract), Document Integration (S3/SharePoint/Box), and Email Sync (SendGrid) components end-to-end
- Designed event-driven backend workflows using TypeScript, microservices, and API-first architecture with comprehensive test coverage
- Building integration pipelines connecting construction documents across cloud storage providers with automated classification and extraction

### Advisor & Engineering Leader | Bank of International Settlements

Jan 2023 — Dec 2025

Seconded from Bank of Canada. Led engineering strategy for a modular, cloud-native settlement platform and ledger infrastructure.

- Achieved 10,000+ TPS throughput on cloud-native settlement platform with full CI/CD pipelines and observability across multi-region deployments
- Built and mentored cross-functional squads, embedding agile practices and coaching team members toward self-organization
- Partnered with enterprise architects, risk, and operations stakeholders to align engineering with organizational strategy
- Prepared roadmaps aligning cross-team dependencies across multiple central banks; delivered executive communications and project updates to senior leadership

### Professor — Blockchain Development | George Brown College

2023 — 2025

Taught in the college's Blockchain Development program, bridging industry experience with academic curriculum.

- Delivered courses on Advanced Smart Contracts, DevOps in Blockchain, and Building Scalable Blockchain Apps
- Designed hands-on labs using Solidity, Hardhat, and CI/CD pipelines to simulate real-world blockchain engineering workflows
- Mentored students on capstone projects involving DeFi protocols, NFT marketplaces, and enterprise DLT integrations

### Fintech Researcher — CBDC | Bank of Canada

Apr 2021 — Jan 2023

Researched Central Bank Digital Currency feasibility, evaluating DLT and non-DLT implementation options.

- Led architectural design for the Dual Ledger bond settlement project using wholesale CBDC
- Prepared comprehensive oracle business model comparison informing CBDC implementation strategy
- Evaluated tokenized payment concepts and digital asset infrastructure for central bank deployment

### Blockchain Lead | Scotiabank

Sep 2017 — Aug 2019

Led blockchain strategy and engineering at Scotiabank's Digital Factory, building production payment systems and driving organizational adoption.

- Built Mano — an internal permissioned payment system on private Ethereum with POS integration, used daily for real transactions across the Digital Factory
- Led DLT-based mortgage insurance tracing across multiple financial institutions in collaboration with Aviva Insurance, ensuring transparency and auditability
- Led proof-of-concepts and pilots across Scotiabank locations, validating blockchain use cases with business streams and senior stakeholders
- Operated within Scotiabank's structured SDLC, change management frameworks, and enterprise governance standards; collaborated with AI/ML team on credit card fraud detection

Led front-end and full-stack development for Aviva's digital insurance products in the innovation lab.

- Built mobile-first insurance application with Guidewire integration serving thousands of policyholders
- Contributed to RBC-Aviva merger insurance quoter — a production system still in active use today
- Collaborated with UX and product teams to iterate on customer-facing flows, reducing quote completion time

## SELECTED PROJECTS

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**Mano (Scotiabank):** Permissioned Ethereum payment system with digital wallet and POS integration for daily real transactions.

**Cloud-Native Settlement Platform (BIS):** 10,000+ TPS modular settlement infrastructure. Kafka, Cassandra, Redis, AKS.

**CBDC Dual Ledger (Bank of Canada):** Wholesale digital currency bond settlement with oracle business model evaluation.

**OpenLibra Protocol:** Founding engineer — open-source fork of Facebook's Libra. Consensus, governance, Move smart contracts.

**Plebis:** AI-augmented governance for Cosmos ecosystems with RAG, LLM summarization, and validator reputation scoring.

## TECHNICAL SKILLS

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**Blockchain:** Ethereum, Solidity, Move, Hyperledger, Corda, Quorum, EVM L2 Rollups, Hardhat, ethers.js, web3.js

**Languages:** TypeScript, JavaScript, Python, Java, C#, Rust, Go

**Cloud & Infra:** AKS, AWS, GCP, Docker, Kubernetes, Terraform, GitOps, CI/CD

**Data:** Kafka, Cassandra, PostgreSQL, MongoDB, Redis

**APIs:** REST, GraphQL, gRPC, ERC-20, ERC-721, ERC-1155

**Leadership:** System Design, TOGAF, Agile/Scrum, Technical Mentoring, Stakeholder Facilitation

## EDUCATION

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**PhD, Computer Engineering** — University of Toronto

Jan 2019 — Jul 2024

- Published research on smart contract verification and formal methods for blockchain systems

**MSc, Computer Science** — University of Ottawa

Sep 2013 — Jun 2015

**BSc, Computer Science** — Osmania University, India

Aug 2004 — Aug 2008

## CERTIFICATIONS & ACHIEVEMENTS

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**TOGAF 10 Enterprise Architect Foundation** | Google Project Management Professional Certificate

**G20 TechSprint Judge** | Crypto Chicks Hackathon 2019 Winner