Prem Moola
Senior Technology Executive | AI-Native Platforms| Agentic Systems & Engg Strategy
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SUMMARY

Strategic and innovation-driven technology executive with over 20 years of experience leading global engineering organizations and building enterprise-scale data and AI platforms across financial services, SaaS, and media. My career spans global financial institutions, emerging startups, and enterprise-grade technology environments—each reinforcing a consistent focus on solving complex problems through scalable, data-driven systems.

I specialize in designing and implementing modern cloud-native platforms, distributed data pipelines, and AI/ML-driven systems that deliver measurable business outcomes. A core focus of my recent work is positioning engineering organizations to adopt agentic AI as an integrated capability, embedding AI agents into the software development lifecycle, data platforms, and operational workflows—rather than treating AI as isolated tools.

Known for combining deep technical leadership with strategic execution, I have modernized legacy platforms, accelerated digital transformation, reduced operational costs by up to 80%, and led global teams of 100+ engineers while establishing the architectural guardrails, governance models, and cultural practices required for safe, scalable AI adoption.

CORE COMPETENCIES

Agentic AI & Intelligent Systems
Agentic AI Platforms • Multi-Agent Orchestration • MCP-Based Architectures •
AI-Assisted Development (Human-in-the-Loop / Vibe Coding) • Conversational Data Access •
AI-Driven Decision Support & Automation

Enterprise Engineering & Platforms
Cloud-Native Platforms • Distributed Data Pipelines • Big Data (Hadoop, Spark) •
Machine Learning Platforms • Microservices • Scalable Infrastructure

Leadership & Strategy
Technology & Platform Roadmaps • AI-Native Operating Models • Digital Transformation •
Agile / DevOps • Global Engineering Leadership

Governance, Risk & Compliance
Responsible AI Enablement • Regulatory Compliance (SEC, CFTC, ESMA) •
Security • Data Privacy • Enterprise Architecture

PROFESSIONAL EXPERIENCE

BNY MELLON — Senior Director
Lake Mary, FL | Sep 2024 – Present | 45-person global organization
- Defined and executed the enterprise Alternatives Data Strategy, aligning platform modernization, AI adoption, and regulatory compliance with long-term business growth.
- Architected a next-generation AI-native Data Engineering Platform, improving scalability, consistency, and reporting accuracy across business units.
- Standardized ingestion from multiple accounting engines into a unified data schema, reducing reconciliation effort and cycle time by 40%.

- • Built an MCP-based agentic AI platform, enabling multiple specialized AI agents to collaborate on complex enterprise workflows such as validation, reconciliation, and analytics.
- • Introduced conversational, AI-driven data access for business users, reducing time-to-insight by 70% and improving self-service analytics.
- • Championed human-in-the-loop AI-assisted development, accelerating prototyping while maintaining architectural and governance discipline.
- • Winner, BNY AI Hackathon — developed and deployed an AI-based anomaly detection solution adopted into production monitoring.
- • Led globally distributed teams using transparent architecture, design, and decision-making frameworks.

THIRD SUMMIT / ALTEON.IO — Vice President of Engineering
New York, NY | Mar 2021 – Jan 2024 | 35-person global organization
- • Owned end-to-end technology strategy and execution for Alteon's cloud SaaS platform serving creators and enterprise media clients (CNN, Disney, etc.).
- • Built and scaled an enterprise-grade media processing and transcoding platform supporting all major file formats, including AR and Apple codecs.
- • Integrated deeply with professional creative tools (Adobe, Final Cut Pro, DaVinci Resolve), reducing editorial turnaround time by 50%.
- • Partnered with hardware vendors to embed Alteon into camera workflows, enabling direct, cloud-native media ingestion.
- • Reduced cloud infrastructure costs by 80% through architectural optimization and vendor renegotiation.
- • Oversaw CI/CD pipelines, cloud infrastructure, and security posture while maintaining 99.99% uptime.
- • Led globally distributed product and engineering teams delivering features at high velocity.

CAT TECHNOLOGY INC — Vice President of Engineering
Hackensack, NJ | Nov 2017 – Mar 2020 | 40-person organization
- • Built and operated a private cloud platform using VMware and Docker, supporting scalable enterprise workloads and reducing hosting spend.
- • Designed and implemented large-scale data pipelines (HDFS, Spark, ElasticSearch) consolidating analytics across multiple business lines.
- • Automated SDLC and CI/CD workflows, increasing deployment frequency 5× and reducing release cycles from weeks to days.
- • Led onshore and offshore engineering teams while strengthening security and compliance posture.

STEALTH REAL ESTATE STARTUP — Chief Technology Officer
New York, NY | Jun 2017 – Oct 2019
- • Defined technology vision and architecture for data-driven property intelligence and ML-based recommendation systems.
- • Built data pipelines, BI platforms, and lead-scoring models improving conversion rates by 30%.
- • Scaled product capabilities while operating within complex state-level regulatory environments.

GOLDMAN SACHS — Vice President, Engineering
New York, NY | Sep 2004 – May 2017 | 120-person global organization
- Led global technology strategy for trading, risk, and regulatory platforms supporting buy-side and sell-side operations.
- Developed and managed large-scale analytical platforms, including a 46-node Sybase IQ cluster, reducing operational costs by 75% YoY.
- Built enterprise data platforms (Hadoop, Spark, MemSQL) supporting analytics and regulatory reporting across jurisdictions.
- Delivered real-time, low-latency trade processing systems handling high transaction volumes.
- Directed regulatory technology initiatives for CFTC, ESMA, NSD, JFSA, and Canada.
- Mentored global teams and fostered an engineering culture centered on accountability and continuous improvement.

EDUCATION
M.S., Computer Science — Fairleigh Dickinson University (2002)
B.S., Computer Science Engineering — University of Madras (2000)

TECHNICAL EXPERTISE
Languages & Platforms
Java, Python, Scala, SQL, Docker, Kubernetes, AWS, Azure, GCP

Data & Analytics
Hadoop, Spark, ElasticSearch, Snowflake, HDFS, MemSQL, Sybase IQ

DevOps & Infrastructure
Git, Jenkins, Terraform, Ansible, CI/CD Automation

Finance & Compliance
Trade Processing • Derivatives • Global Regulatory Reporting

SELECTED ACHIEVEMENTS & LEADERSHIP IMPACT
- Led global engineering organizations of 100+ across three continents, delivering scalable platforms and predictable execution.
- Reduced operational overhead by up to 75–80% through automation, data standardization, and architectural optimization.
- Designed and deployed agent-based AI systems for predictive analytics, anomaly detection, and intelligent data access.
- Enabled engineering teams to adopt AI responsibly by pairing agentic systems with governance, operating models, and human oversight.
- Built transparent, high-performing engineering cultures that connect system design to measurable business outcomes.