Manuj Paliwal

Staff Software Engineer | AI/ML Platform Architecture | Engineering Leadership

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PROFESSIONAL SUMMARY

Staff Engineer with **12 years** building production AI/ML platforms in fintech. Scaled engineering team through successful acquisition (Cloud Lending → Q2), architecting loan origination platform serving 50+ financial institutions across 4 continents. Founded VC-backed startup (Alliance DAO, TechCrunch featured) building Web3 financial infrastructure.

PROFESSIONAL EXPERIENCE

Staff Software Engineer

App0 | Bengaluru, India | *Sep 2023 – Oct 2025*

- Designed 3-layer cascading AI security guardrails (Pattern → Moderation → ML) achieving **93% prompt injection detection** at **0ms perceived latency** across 65+ attack patterns
- Architected agentic tool calling framework with 59 LLM tools across 7 categories, supporting pre/post-processing pipelines used across all conversation flows
- Built RAG Knowledge Base platform with multi-source connectors (S3, Google Sheets, Web, Local) and async retrieval pipeline serving production workloads
- Designed extensible AI evaluation framework with plugin-based registry supporting 5 evaluator types, enabling systematic quality assessment across models
- Built conversation analytics platform processing 10,000+ monthly conversations using BERT for semantic matching and topic modeling
- Optimized batch processing achieving **90% faster deduplication** through single-scan optimization; reduced database queries by 80% via in-memory caching

Technologies: Python, FastAPI, AWS (Lambda, DynamoDB, S3, SQS), PostgreSQL (pgvector), OpenAI, BERT, TypeScript

Co-Founder & CTO

Mensari (Alliance DAO & Georgia Tech backed | TechCrunch featured) | *May 2022 - Sep 2023*

- Co-founded crypto treasury platform: double-entry accounting engine supporting fiat, crypto, and NFTs with real-time multi-chain indexing across 6 networks
- Built declarative rule engine enabling 100% automated transaction classification; integrated bidirectionally with QuickBooks and Xero for enterprise workflows
- Architected multi-chain infrastructure with Gnosis Safe multi-sig support for enterprise custody; shipped to 15 beta customers

Technologies: Next.js, Node.js, TypeScript, MongoDB, Web3, Alchemy SDK, AWS, Docker, Kubernetes

Software Engineer → Engineering Manager

Q2 Software (Cloud Lending Solutions pre-acquisition) | Bengaluru, India | *Nov 2013 - Apr 2022*

- Scaled engineering team from 3 to 8 members through successful Q2 acquisition, delivering highest revenue-generating product
- Architected multi-tenant loan origination platform serving **50+ financial institutions** across North America, UK, Africa, and ANZ
- Built Rule Engine powering core platform: scorecard generation, document management, pricing, covenants, and task workflows
- Developed Financial Spreading module for commercial loan analysis; led Salesforce Security Review for enterprise compliance
- Implemented intelligent bank reconciliation reducing manual effort by **80%** through automated matching algorithms
- Mentored 3 engineers to senior roles; drove market expansion including Australia entry

Technologies: Salesforce (Apex, LWC, SOQL), Python, JavaScript, PostgreSQL

EDUCATION

MS Computer Science — Georgia Institute of Technology | *Specialization: Artificial Intelligence*

B.Tech Computer Science — APJ Abdul Kalam Technological University | *2012*

TECHNICAL EXPERTISE

AI/ML Platform: OpenAI GPT, BERT, RAG Systems, pgvector, Prompt Injection Detection, AI Guardrails, Agentic Frameworks, NLP

Infrastructure: Python, FastAPI, Node.js, AWS (Lambda, DynamoDB, S3, SQS), PostgreSQL, Docker, Kubernetes, Event-driven Architecture

Domain: Fintech, AI Conversation Platforms, Lending/Origination, Multi-tenant SaaS