Raghunath Manyam

PRINCIPAL ENGINEER · SYSTEMS ARCHITECT · ENGINEERING MANAGER

22 years · Finance & Insurance · AWS · Claude · Mainframe → Cloud

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BY THE NUMBERS

Billions of dollars in treaty exposure on systems I designed	**70+** engineers led US, India and Europe	**<5 s** search from 3–5 minutes	**8** AI stages in production	**22** years regulated industries

CURRENT ROLE

Lead Engineer

Sep 2020 - Present

Cognizant — Financial Services Client

Enterprise Reinsurance modernization at a Tier-1 carrier — a 25+ year-old PL/I + DB2-LUW system carrying $billions in active treaty exposure, with ~50 daily actuarial and finance consumers and no write-freeze tolerance. Own technical direction across the data, application, and reporting tracks; career-wide I have led 70+ engineers, direct and indirect, across the US, India and Europe. Designed the metadata-driven migration pattern that collapsed the 23-table mainframe → Aurora migration into 3 Glue jobs (vs. ~69 the obvious design called for).

SIGNATURE PROJECTS

Modernization Factory — Agentic COBOL→AWS Pipeline

2025 - Present · Cognizant — Financial Services Client

The architectural call: model tiering per stage, not one model for everything — Haiku gates, Sonnet does the structured bulk, Opus reasons only where it changes the outcome. About 35% cheaper on list prices than running Opus on every stage, with no quality regression seen in human review on the structured stages. Stage 4 (Layer Decision) is the one stage on Opus with extended thinking — it routes each mainframe step to Lambda / Aurora SQL / DynamoDB / skip, and getting it wrong cascades through every downstream stage, so it gets a private reasoning budget the other seven stages don't.

Enterprise Reinsurance — Data Migration and Reporting

2020 - 2024 · Cognizant — Financial Services Client

Designed a metadata-driven ETL architecture: 3 generalized Glue jobs (extract, transform, load) covering all 23 source tables — instead of the obvious 3-per-table design (~69 jobs) the team would have built by default. Architected the dual-pipeline split: AWS DMS for one-time historical migration off mainframe DB2-LUW; Glue/PySpark for ongoing ELT and the reporting layer — no DMS dependency on reporting.

Enterprise Reinsurance — Cash Clearance

2020 - 2024 · Cognizant — Financial Services Client

Cut search query latency from 3–5 minutes to under 5 seconds — even for result sets exceeding 100K rows — via DynamoDB caching of search results and PostgreSQL core-table splitting for partitioned reads. Designed a hybrid sync/async execution model in the Lambda backend — interactive flows stay responsive while heavy workloads run async.

TECHNICAL SKILLS

AI Architecture	Agentic pipeline design · Multi-model routing (Sonnet · Haiku · Opus) · MCP as agent tool layer · RAG (structured + unstructured) · Agent loop & stop conditions · Prompt-system design · Production guardrails (cost · latency · audit) · Claude API · MCP Protocol · FastMCP
Cloud & Data	AWS Lambda · AWS DMS · AWS Glue · S3 · EventBridge · Aurora PostgreSQL · DynamoDB · Python · TypeScript · Next.js · Supabase · PySpark · Teradata
Legacy Core	COBOL · PL/I · IMS-DB · DB2 z/OS · JCL · CICS · Ratabase · Informatica PowerCenter · PowerExchange
Leadership & Delivery	Agile/Scrum (CSM) · ITIL Foundation · AWS Serverless Certified · INS 21 Certified · Offshore Coordination · Strategic Execution

Open to: Principal Engineer · Systems Architect · Staff Engineer · Engineering Manager (regulated industries)

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