Neel Krishna

PROFILE

Senior AI & Data Applications Engineer with nearly a decade of experience architecting enterprise-grade distributed systems, multi-agent AI frameworks, and petabyte-scale data pipelines. Proven track record at major financial institutions of bridging the gap between complex data ecosystems (Databricks, Snowflake, Starburst) and business-facing AI solutions. Expert in designing adaptive LLM orchestration layers, high-performance parallel execution workflows, and scalable cloud infrastructure.

Lead AI Applications Engineer, JPMorgan Chase (2024-Present)

- Architected and developed an enterprise-grade, multi-agent conversational **reporting AI platform** using Python/React, enabling business users to query disparate data ecosystems through a unified, highly configurable chat interface.
- Integrated complex data and AI layers, establishing seamless connectivity between multiple **Databricks Genie** spaces, **Snowflake** environments, company knowledge bases, and foundational LLM models.
- Engineered an adaptive execution planner supporting both deterministic and non-deterministic routing strategies:
  - Dynamic routing: a primary **Planner Agent (Google ADK)** which routes queries to specialized "Captain" agents, executing secondary LLM calls to synthesize context-aware responses post-subagent execution.
  - Parallel execution: Implemented a high performance DAG engine using **Temporal** that resolves independent subtasks in parallel and programmatically stitches together distributed outputs.
- Co-developed a centralized **AI Skills** Marketplace for our LOB, establishing a one-stop shop to catalog, discover, and certify custom Claude and Copilot skills
- Architected a scalable reporting platform to replace IBM Cognos for petabyte-scale datasets by orchestrating SQL generation with **Airflow** and integrating data from **Starburst** (on-prem) and **Databricks** (AWS). Developed reporting in **Pandas**, stored metadata in **MongoDB**, and deployed the containerized solution on **Kubernetes** for robust operational management.
- Spearheaded the deployment of **Databricks Genie**, training the **LLM** on complex, multi-source datasets to enable natural language querying for non-technical stakeholders, reducing ad-hoc data requests by an order of magnitude.
- Designed and implemented end-to-end data pipelines from **OracleDB** to **Databricks** across all data maturity stages (raw to curated) using **Python** and **Spring Boot**, enabling a timely migration during a critical datacenter exit.

Head of Engineering, Dope Doctors (2023-Present, Part-time)

- Led end-to-end engineering operations for an international telemedicine platform generating $12MM in annual revenue, including development of the flagship Parlay Med system and a patient-facing application.
- Developed a HIPAA-compliant CRM and internal communication tools, including an AI chatbot and patient application modeled after MyChart, by integrating external **APIs** (Buzzleads, FedEx, GoHighLevel, GCP) to streamline patient-provider interactions.
- Directed a 15-person engineering team, overseeing hiring, technical strategy, and task allocation to ensure timely feature delivery and high team performance.

Senior Software Engineer, Capital One (2019-2023)

- Migrated six **Spring Boot** banking apps from **EC2** to serverless **NodeJS Lambdas**, reducing cloud spend by over $50K annually and significantly cutting infrastructure maintenance hours.
- Deployed advanced telemetry with **NewRelic** for bank transaction Lambdas and enabled regional auto-failover via **Route53** and **CloudWatch**, improving system resilience and observability.
- Modernized front-end bank transaction interfaces by migrating from Angular 1.x to **Angular** 8 with **NGRX**, enhancing performance, maintainability, and user experience.

Software Engineer, Cognistx (2017-2018)

- Created an NLP-based sentiment analysis tool to interpret employee survey responses for an HR client, enabling more data-driven workforce insights.

EDUCATION

University of Pittsburgh – Bachelors, 2015
AWS - Certified Solutions Architect, 2021

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