

TANMAY TRIPATHI

Software Engineer. Noida, 201303, Uttar Pradesh, India.

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Portfolio

Linkedin

GitHub

LeetCode

Scholar

Technical Skills

Programming Languages & Concepts: Java, Python, Golang, Object-Oriented Programming.

Frameworks & Libraries: Spring Boot, Machine Learning, NLP, Langchain, Agentic AI.

Tools & Technologies: Linux, AWS, Docker, Git, GitHub, SQL, Postgresql, Mongo, MCP, RAG.

Development Methodologies & Practices: Troubleshooting/Debugging, Microservice, Distributed Systems.

Courses: Data Structures and Algorithm, Operating System, Relational Database, Deep Learning.

Experience

Software Engineer

Kelly Technologies

February 2025 – Present

Noida, Uttar Pradesh

AML - Compliance Suite

- Delivered full **compliance suite** with 91 api, name screening, transaction monitoring alert ingestion, alert lifecycle and case management in **5 months**.
- Built an **name screening engine** from scratch using **RapidFuzz** fuzzy matching and weighted multi-attribute scoring in Python and **MongoDB Atlas**.
- Cut real-time name screening API latency by **87%+** (9s to 1.2s) through algorithm optimization, robust system architecture, and fine-tuned MongoDB Atlas configuration.
- Redesigned customer rescreening into a **parallel SQS packet-worker pipeline**, and tuned MongoDB configuration using real-time disk throughput, page-fault, and connection-pool analysis — cutting per-customer screening time nearly **2,839x** (21.6s to 7.6ms) while scaling to **200K+ customers** per run.
- Built a centralized **knowledge graph** across all Python + Go microservices by statically parsing each service to the **AST**, mapping code entities, relationships, and cross-service calls into one queryable graph.
- Cut cross-service impact analysis by **77% cost** and **5× latency** by exposing the knowledge graph to an **LLM via MCP** for plain-English queries grounded in real code.

Digital Goods - Marketplace

- Delivered **75+ backend APIs** in **Go**, **Postgres**, **Redis** to launch the Digital Goods marketplace, integrating **200+ billers** on a platform architected to scale to **500K users** and **\$1M GTV** in year one.
- Shipped the backend for a consumer MVP across **12+ user flows** in **under 3 months**, powering a milestone that helped secure **\$3M+ in funding**.
- Built fault-tolerant, event-driven **order-fulfillment flow** with **AWS SNS/SQS**, integrating vendor and payments.
- Automated vendor-company reconciliation in **Go + Lambda** across **10,000+ transactions**.

Projects

We-Wright — Autonomous Coding Agent | *Python, Claude Agent SDK, FastAPI, React, Docker*

- Built an **ai agent** that autonomously plans and ships code across 3 microservices via a 5-phase workflow (Discover, Implement, Verify, Ship) with a human-approval gate, using the **Claude Agent SDK**, **29 MCP tools**, **Pydantic** contracts, and per-run **Git worktree** sandboxing as guardrails.
- Cut **LLM cost 30%** and returned cross-service impact analysis in **under 90s** using **GraphRAG** over a **7.5K-node Neo4j** knowledge graph with model-tier routing and prompt-cache-aware context engineering.
- Improved follow-up answer accuracy with semantic retrieval, embedding conversation turns via the **E5 model** and ranking by **cosine similarity** to surface top-5 relevant exchanges as grounding context.

Achievements

- Published "**Communication-Efficient Federated Learning for Real-time Applications in Edge Networks**".
- Published "**Enhancing Edge-based Cardiovascular Diagnosis through Federated Learning and IoT**".
- Won **First Prize** at MUJ HackX **Hackathon** (Oct 2023) for an AI-powered dermatoscope app.
- Solved over **750 DSA** problems, earning **8 badges** and a **LeetCode Knight** with max rating of **1,965** (Top **3%**).
- Achieved global ranks of **71** (Weekly Contest 438) and **842** (Biweekly Contest 145) in LeetCode contests.

Education

Manipal University

B.Tech in Information Technology

2021 - 2025

9.22 cgpa