Utkarsh Kumar

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Work Experience

PeopleStrong **May 2025 – Present**
SDE-1 (Promoted from Trainee) *Gurugram*

- Optimized large Excel report generation by **eliminating memory bottlenecks** through JDBC streaming and disk-based writes (Aspose LightCells), using Kafka for request throttling, while **accelerating processing** with parallel execution.
- Reduced payslip generation time for **30k employees** from **1 hour to 10 minutes** by parallelizing PDF generation, optimizing lookups with HashMap, and leveraging **GCP Cloud Storage and Cloud Functions**.
- **Reduced support-to-developer escalations** by building an **AI chatbot** (Python, Flutter) with a **RAG pipeline** that answers queries from **embedded** playbook documentation in Elasticsearch using **semantic search.**

Ionage **Jan. 2025 – May 2025**
Software Engineer Intern *Remote*

- Implemented Razorpay **refund workflow** with webhook-based status tracking in the company's wallet system using Golang, enabling reliable and automated payment refunds.
- Enabled **fast vehicle lookups** by implementing a read-through cache.

Clienter AI **Jan. 2024 – July 2024**
Software Engineer Intern *Remote*

- **Digitized** timesheet submission and payroll calculation by building an **end-to-end module** with Spring Boot and Next.js (TypeScript) for accountants.
- **Improved app responsiveness** by implementing paginated APIs (Spring Data JPA) and frontend debouncing to reduce unnecessary server requests.

Projects

Integrated Architecture Environment | Demo | *Next.js, Express.js, PostgreSQL, Yjs, tldraw, WebMCP, Trigger.dev*

- Built a **real-time collaborative system-design platform** with tldraw and Yjs, enabling multiple users to edit architecture diagrams with **live synchronization** and **role-based project sharing**.
- Integrated **AI-assisted architecture generation** and **markdown spec export** using Groq and Trigger.dev, with **WebMCP** enabling AI agents to interact with the application through **browser-native tools**.

Log2PR (Elasticsearch Hackathon) | Code & Demo Video | *LangGraph, LangChain, MCP, Deep Agents*

- Built a **multi-agent AI system** that pulls **error logs from Elasticsearch**, converts them into **code fixes**, auto-generates **GitHub PRs**, and notifies developers via **Slack**.

Skills

Languages: Java, Python, JavaScript, TypeScript, SQL
Backend & Infra: Spring Boot, Express.js, FastAPI, Git, Docker, MongoDB, Redis, Kafka, AWS
Gen AI: LangGraph, LangChain, Retrieval-Augmented Generation, Model Context Protocol, Agentic AI, Vector Search
Frontend: React, Next.js, Flutter, React Native

Certifications

- Generative and Agentic AI with Python (Udemy)
- Java Spring Framework 6 with Spring Boot 3 (Udemy)

Leadership / Extracurricular

Google Developer Groups **Nov. 2023 – May 2025**
Executive Member *NITK Surathkal*

- Led the development of the **official website** for **NITK Photography Club**.

Education

National Institute of Technology **Dec. 2021 – May 2025**
Bachelor of Technology *Surathkal, Karnataka*