

Mukul Singh

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WORK EXPERIENCE

Senior Software Engineer, Info Edge, Noida Apr. 2025 – Present

- Designed and developed an in-house tool to quickly create **MCP servers from any API** within minutes, with features like, tool execution monitoring, server access control, and team management
- Built an in-house platform to create **AI agents**, with capabilities driven by MCP tools, prompts, and resources
- Designed and developed **Job Agent product** providing automated applications on jobs matching user profile

Software Engineer, Info Edge, Noida Jul. 2023 – Mar. 2025

- Designed and developed **subscription payment service**, along with a **transaction timeline** for complete payment transaction lifecycle visibility
- Upgraded job search services from Java 8 to Java 21, leveraging **virtual threads** resulting in a 3x improvement in system concurrency and **reducing server costs by 25%**
- Designed and deployed a rule-based scraping detection system, **reducing naukri data scraping by 90%**
- Implemented a delay queue library for **kafka** enabling **scheduled distributed processing** of events
- Developed and launched Branded Job Description and Naukri Talent Cloud product on Naukri for **50M users**
- Designed and developed a **centralised authentication system** to allow cross platform features on various Info Edge recruiter platforms
- Designed and implemented a **distributed locking library** using **Aerospike** to guarantee single execution of cron jobs across multiple service instances

Software Engineer Intern, Info Edge, Noida Jan. 2023 – Jul. 2025

- Created a **no-code platform** to **aggregate API responses** from various micro-services with a self service user interface for developers to onboard aggregations according to their use case.
- Optimized parallel execution of multiple interdependent services through **topological sorting** of service DAGs
- Reduced development time for new features by providing a no-code solution for data aggregation.

SKILLS

- Programming Languages:** Java, Javascript, Typescript, Python, SQL
- Technologies:** Spring Boot, React.js, MySQL, Kubernetes, Docker, Aerospike, Kafka, Airflow
- Other:** Distributed Systems, SDLC, Full-Stack Development, High-Level Design, Low-Level Design, Linux, Prompt Engineering, Context Engineering, RAG, Agentic AI, Model Context Protocol(MCP)

PERSONAL PROJECTS

AI Expense Tracker | Spring Boot, React.js, Prompt Engineering, MCP June, 2025

- Developed an **AI agent** that processes emails containing bank transactions, credit card transactions, and statements to track expenses. The **MCP server** allows users to chat with their expenses and find insights.
- Provides automated expense tracking through a beautiful **open source self-hosted application**.

Factory Floor QA | React.js, Django, Server Sent Events June, 2021

- Created a **full-stack application** to track quality of manufactured products in textile factories.
- Powered by an app for inputs, and backend data aggregations, provided a real-time view of all production lines.

EDUCATION

University of Delhi, Department of Computer Science
M.Sc. Computer Science

June, 2023
Delhi