

# Abhishek Kumar

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## SUMMARY

Experienced Backend Developer from IIT Delhi and a strong background in designing and implementing scalable micro-services and high-performance data processing systems. Skilled in Python, FastAPI, Java, PostgreSQL with expertise in asynchronous processing, message queues, agentic AI workflows and real-time data handling.

## WORK EXPERIENCE

### Limitless Neurons, Hyderabad | Software Engineer

May 2025 - Present

- **Shapes Chat** | FastAPI, SQLite, Langchain, Langgraph

- \* Architected and built a high-performance RAG system enabling users to chat with real-time RSS feeds, integrating multiple LLM providers via LiteLLM, reducing vendor lock-in and optimizing query costs.
- \* Engineered complex agentic workflows using LangGraph to perform autonomous multi-step analysis (conflict detection, topic clustering) on aggregated news streams, delivering deep insights beyond simple retrieval.
- \* Implemented a local-first Vector Search architecture using ChromaDB, optimizing retrieval precision with hybrid search strategies (semantic + keyword) and dynamic context window management.
- \* Developed a streaming response infrastructure using Server-Sent Events (SSE) and WebSockets, enabling real-time token streaming for AI responses, significantly improving perceived user latency.

- **Autogrid** | FastAPI, SQLite, React, Electron

- \* Architected an Async Execution Engine using Python asyncio, orchestrating 100+ concurrent AI/API tasks across complex DAGs while enforcing granular rate limits to ensure system stability.
- \* Designed a type-safe Plugin System with Protocols and Pydantic, standardizing config validation and lowering integration effort by 40% for services like OpenAI and Clearbit.
- \* Engineered a local-first Desktop App bundling FastAPI and React within Electron, automating cross-platform builds (macOS/Windows) via PyInstaller and custom CI pipelines.

### Cogoport, Gurgaon | Software Development Engineer - 1

September 2023 - April 2025

- **Business Finance** | Kotlin, Micronaut, Postgresql, RabbitMQ, FastAPI

- \* Developed robust APIs leveraging complex SQL queries within the Centralized Finance system, facilitating payment processing for 100+ daily transactions and ensuring accurate financial reporting.
- \* Engineered IRN generation for real-time e-invoice declaration in China utilizing the Aisino platform, achieving 100% compliance with tax regulations and slashing manual intervention by 85%.
- \* Optimized concurrency via ThreadPool, cutting API runtime by 40%, boost performance of 10+ APIs.

- **Job Card** | Python, FastAPI, Postgresql, Tortoise-ORM, Apache Kafka, Websockets

- \* Leveraged Apache Kafka for real-time data streaming and designed a job allocation logic optimized for operator expertise, stickiness and organizational requirements.
- \* Implemented WebSockets to establish real-time communication between client and server, reduced data latency by 90% and improved user engagement by 50%.
- \* Automated task processing using cron jobs, reducing failures by 60% and enhancing execution efficiency.

- **Shipment Execution** | Python, FastAPI, Postgresql, Peewee

- \* Contributed to end-to-end migration of Shipment business logic from Ruby on Rails to FastAPI.
- \* Engineered robust, scalable APIs for invoicing, reducing API runtime by 70% and optimizing DB integration; leveraged Redis, Celery, and Flower to efficiently manage delayed tasks to boost system performance by 60%.
- \* Implemented a cancellation flow for shipment and services along with code enhancements, resolved 25+ bugs.

## EDUCATION

### Indian Institute of Technology, Delhi

2019 - 2023

Bachelor of Technology in Chemical Engineering

CGPA: 8.386/10

## TECHNICAL SKILLS

**Programming Languages:** C++, Python, Java, JavaScript, Kotlin, SQL

**Frameworks/Libraries:** FastAPI, Langchain, Langgraph, Springboot, Micronaut, Node, React

**Infrastructure/Tools:** PostgreSQL, Kafka, RabbitMQ, ChromaDB, Git, Celery, WebSocket, Redis