# Rajiv Kumar Yadav Software Engineer

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Portfolio



## PROFESSIONAL EXPERIENCE

Software Engineer January 2025 – Present

Axtria India Pvt. Ltd. 🛮

- Designed and implemented an AI-driven query generation system in Python (FastAPI), Knowledge Graphs, RAG, and vector databases, cutting manual SQL query effort by 80% and improving accuracy by 25%.
- **Optimized** system performance with batch processing and parallel execution, reducing query generation time from **30 min to 3 min** and boosting throughput by **300**%.
- Architected concurrent, event-driven distributed systems in Go, processing 10M+ records 40% faster.
- Automated 5+ **data pipelines** using Go microservices, Kafka, and REST APIs, enabling real-time alerts in a **cloud-native** environment and reducing manual intervention by **60**%.
- Collaborated with DevOps, frontend, and data engineering teams to enhance CI/CD pipelines using Docker and Kubernetes, delivering reliable and scalable releases.

## Junior Backend Engineer

October 2023 - December 2024

Archmed Biotech Pvt. Ltd.

- **Engineered** a scalable inventory management system with Python (FastAPI) & PostgreSQL, improving tracking accuracy to **99.5**% and reducing manual data entry by **40**%; containerized with Docker and deployed on AWS EC2.
- **Developed** a back-end for an internal reporting dashboard in Python, processing **1,000+ daily data points** to deliver real-time performance insights for stakeholders.
- **Built** a custom CRM system consolidating client data, boosting lead management efficiency by **20**% and increasing conversion rates by **15**% within three months.
- **Automated** batch-expiry notifications with a Python utility, ensuring timely alerts for sales teams and reducing missed sales opportunities.

## **EDUCATION**

## **Bachelor of Engineering in Computer Science**

2021 - 2025

Chandigarh University CGPA - 8.2

#### **PROJECTS**

# Secure Authentication System with OTP Verification and JWT-based Authorization (Go)

- Built a secure authentication system with JWT, OTP via Twilio, email, and OAuth integration, reducing unauthorized access.
- Implemented modular architecture with Redis, rate limiting, improving API response speed and blocking brute force attacks.
- Integrated PostgreSQL with SQLC for type safe database operations, reducing runtime errors by 70%.

## Snapgram - A Full-Stack Social Media Web App

- Built a scalable social media app with React, TypeScript, and Appwrite, featuring secure authentication.
- Developed efficient CRUD operations, integrated real-time features, and increased user engagement 45%.
- Optimized frontend performance using React hooks, Context API, Tailwind CSS, reducing load times 40%.

## **Smart Traffic Vision System using YOLOv8**

- Designed real-time vehicle and license plate detection system using YOLOv8, deployed with Flask for ANPR.
- Achieved 98% precision in license plate recognition, optimizing YOLOv8 model performance despite strict hardware limitations.
- Utilized Python for preprocessing, model training, and Flask deployment, enabling accurate, scalable, real-time computer vision.

## **SKILLS**

## **Technical Skills**

Python, Go, Flask, FastAPI, Gin, React (JavaScript/TypeScript), SQL, PostgreSQL, MySQL, Snowflake, Clickhouse, REST APIs, JWT-go, Docker, AWS, Git, GitHub Actions, Postman, ETL Automation, Agile, Jira, CI/CD, TensorFlow, Keras, PyTorch, Scikit-learn, OpenCV, Linux, Bash, gRPC, Azure, Grafana, Langchain, Langgraph

## Other/Tools

MLOps, Data Pipelines, Distributed Systems, Cloud-native Architecture, GenAI, Prompt Engineering