

# Sanjeeb Tiwary

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## PROFESSIONAL SUMMARY

Software Engineer with 2+ years of experience in AI-driven and data-intensive systems, skilled in Python, cloud (AWS/Azure), and GenAI solutions including LLMs, vector databases, and multi-agent workflows. Experienced in building scalable solutions for industrial automation and real-time analytics.

## CORE SKILLS

- **Languages:** Python, SQL
- **GenAI / LLM:** Ollama, LangChain, LlamaIndex, RAG pipelines, vector DB (Qdrant), document chunking & embeddings, multi-agent orchestration, MCP tool integration
- **Data Engineering:** ETL pipelines, data transformation, automation
- **Databases:** PostgreSQL, MongoDB, Elasticsearch
- **Big Data:** PySpark, apache airflow, Hadoop, Kafka
- **Frameworks:** Django, FastAPI, Express, AWS Lambda
- **Cloud:** AWS (EC2, S3, Lambda, Glue, SageMaker, Bedrock), Azure (basic)
- **DevOps:** Git, GitHub, Docker, CI/CD
- **Tools:** GitHub Copilot, AI-assisted development
- **Domains:** Industrial automation analytics, geospatial systems, computer vision

## PROFESSIONAL EXPERIENCE

### Technowell Enterprise Services Pvt. Ltd.

#### Geospatial Data Engineer / Data Science Specialist

Jan 2024 – Present | Hyderabad, India

- Designed and deployed **AI-driven data pipelines** using **Python, PySpark, AWS**, improving analytics performance by **30%**.
- Built **real-time monitoring and analytics systems** for industrial and environmental automation use cases.
- Developed **GenAI-powered knowledge assistants** using **LangChain, LlamaIndex, Ollama, and vector databases (Qdrant)** for document intelligence and decision support.
- Implemented **RAG pipelines** for:
  - Document search
  - SQL database querying
  - Knowledge graph integration (OrientDB concepts)
- Designed **multi-agent workflows** to automate data validation, reporting, and anomaly detection.
- Deployed applications using **AWS Lambda, EC2, Docker**, supporting both **cloud and on-prem setups**.
- Collaborated in **Agile teams**, using Git, Bitbucket, and DevOps toolchains.
- Leveraged **AI productivity tools (Copilot, LLMs)** to accelerate development cycles by ~25%.

### Zummit Infolabs – Junior Data Scientist

Feb 2023 – Jun 2024 | Bengaluru, India

- Built **AI-powered video analytics systems** for crowd anomaly detection and operational monitoring.
- Developed **ML pipelines** using Python, TensorFlow, PyTorch, and MongoDB.
- Optimized model performance, achieving **20% improvement in detection accuracy**.
- Contributed to **industrial automation PoCs** involving real-time data ingestion and dashboarding.

## KEY PROJECTS

### GenAI Knowledge Assistant for Industrial Data

- Hosted **LLMs using Ollama**.
- Built **document chunking + embedding pipelines** with LangChain.
- Stored embeddings in **Qdrant vector DB**.
- Implemented **multi-agent orchestration** for:
  - Query understanding
  - Data retrieval
  - Response synthesis
- Enabled **text + SQL hybrid search** for operational teams.

### Real-Time Crowd & Operations Intelligence Platform

- Designed backend services in **Python + Django/FastAPI**.
- Integrated **AWS Lambda** for scalable inference.
- Built **Postgres + Elasticsearch** based analytics store.
- Delivered dashboards for **industrial safety & monitoring**.

### Automated Environmental Monitoring System

- Developed **ETL pipelines** in Python & PySpark.
- Deployed on **AWS** with CI/CD using GitHub Actions.
- Used AI models for **anomaly detection in sensor data**.

## EDUCATION

### B.Tech – Computer Science

KIIT University, Bhubaneswar (2021–2024)

### Diploma – Electronics & Telecommunication

KIIT Polytechnic (2018–2021)

## CERTIFICATIONS

- Google Cloud – Generative AI
- Microsoft – Data Analytics
- Google Analytics Certified