Akash Kumar Pandey

Contact Information

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Personal Summary

A data professional with over **4 years of experience** in SQL development, data warehousing, and retail analytics. Specializes in **Generative AI and Agentic AI** applications, with a strong foundation in scalable data systems and automation. Seeks to design and deploy intelligent, LLM-powered business solutions by combining a data engineering background with advanced AI expertise.

Education

- **B.Tech in Electrical Engineering**, Heritage Institute of Technology, Kolkata (2017–2021)
- **GPA**: 8 DGPA

Work Experience

- **System Engineer**, Tata Consultancy Services, Bengaluru, Karnataka (2022–Present)
    - **Woolworths South Africa**: Designed and optimized SQL procedures, SSIS data flows, and scheduled jobs for data warehousing. Improved report generation speed by **30%** and automated data validation workflows, reducing manual intervention by **40%**.
    - **Lifestyle (Landmark Group)**: Designed and implemented an **AI-driven batch monitoring and self-healing agent** in Python for enterprise batch jobs. The agent autonomously interpreted SOPs using LLM-based reasoning to execute corrective actions.
    - **Key Contribution**: Served as the primary developer for the end-to-end RFID integration project for **250 stores**, creating procedures and ensuring data integration with downstream systems like RMS and DWH.

Skills

- **Top 3 Proficient Skills**:
    1. **SQL Development & Data Warehousing**: Over 4 years of extensive experience with SQL (T-SQL) and tools like SSIS/SSRS. Proficient in query optimization and ETL logic.
    2. **Generative AI & Agentic AI**: Expertise in developing autonomous AI agents and leveraging **prompt engineering** for real-world business solutions.
    3. **Python Programming**: Used for building AI solutions, automation scripts, and proof-of-concept tools.
- **AI/ML**: Generative AI, LLM Integration, Prompt Engineering, Agentic AI Orchestration.
- **Data Engineering**: SQL (T-SQL), Python, SSIS, SSRS, Qlik Sense, Git, Automic (UC4).
- **Cloud/Tools**: Azure TFS, SQL Server Management Studio, VS Code, API Integration, Gradio.
- **Soft Skills**: Analytical Thinking, Collaboration, Adaptability.

Projects

- **AI-Driven Batch Monitoring & Self-Healing System**: A production-grade AI agent that monitors enterprise batch jobs and autonomously executes corrective actions using **LLM-based SOP interpretation**.
- **LLM-Powered Test Case Generator**: A Python tool that uses **Qwen14b** and prompt engineering to generate structured test cases from functional design documents.
- **RFID Integration for Retail Inventory**: A project that processed and integrated live inventory data for 250 retail stores.
- **Retail Data Warehousing**: Designed and optimized data flows using SSIS and T-SQL.
- **Retail Sales Dashboard with Qlik Sense**: An interactive dashboard with live KPIs to enable data-driven decisions.
- **AI-Powered Brochure Creation Tool**: A personal project published on GitHub that generates professional brochures from website URLs using Python, Gradio, and open-source LLMs.

Certifications

- **AWS Certified Data Engineer - Associate** (In Progress)

Achievements

- **Star of the Month Nomination**: Recognized for outstanding performance and contributions.
- **TCS Wings 1 Exam**: Cleared a key internal professional certification at Tata Consultancy Services.

- **RIO Session Recognition**: Acknowledged for conducting RIO (Re-skill, Innovate, Optimize) sessions.

Extracurricular Activities

- **Sports**: Enjoys playing cricket and volleyball.

Career Goals

- **Next 5 Years**: Grow into a specialized **AI Engineer/Architect** role, focusing on building and deploying production-ready AI systems. Deepen expertise in LLMs, agentic AI frameworks, and MLOps.
- **Next 10 Years**: Aspires to lead **AI-driven transformation initiatives** at scale, mentoring teams and designing intelligent automation platforms. Passionate about applying AI to solve complex, high-impact business problems in industries like **retail, fintech, and enterprise automation**.