

**Akshay Shiwarkar**

**United Kingdom**

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[LinkedIn Profile](#) | [Portfolio](#)

## Professional Profile

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**Data Engineer and AI Product Specialist** with a Master's in Data Analytics, combining 2.5+ years of SAP BASIS experience with expertise in building intelligent analytics platforms that transform unstructured content into actionable business intelligence. Proven track record architecting end-to-end data pipelines that ingest, analyse, and synthesize millions of data points through AI-powered workflows, reducing manual analysis time from hours to seconds. Expert in prompt engineering and schema design to extract structured insights from unstructured data, implementing quality validation systems that achieve 95%+ accuracy. Skilled at designing scalable data architectures, orchestrating asynchronous processing systems, and building analytics products that bridge technical infrastructure with data-driven decision-making.

## Key Skills

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### **Data Engineering & AI:**

ETL/ELT Pipelines, RESTful API Design (FastAPI), Asynchronous Job Orchestration, Prompt Engineering, LLM Integration (OpenAI GPT-5/GPT-4o), Schema Design & Validation, YouTube Data API, PostgreSQL, Redis, Docker, CI/CD

### **Analytics & Machine Learning:**

NLP, Predictive Modeling, Statistical Analysis, Risk Analysis, Sentiment Analysis, Pattern Recognition, Data Visualization (Power BI, Tableau), Big Data (Apache Spark, Hadoop)

### **SAP & Enterprise Systems:**

SAP BASIS Administration, HANA/ERP Installation & Migration, Performance Optimization, DR Drills, System Monitoring, Database Administration (HANA, Oracle, DB2, Sybase, MSSQL)

### **Programming & Tools:**

Languages: Python, TypeScript, JavaScript, SQL, R

Frameworks: Next.js, React, FastAPI

Platforms: Linux (SUSE, RHEL), Windows Server, AWS, Azure

Version Control: Git, GitHub

### **Professional Skills:**

Technical Leadership, Cross-Functional Collaboration, Problem-Solving, Stakeholder Communication

## Professional Experience

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### **Product Engineer (Data and AI) | Gusport, London GB | Aug 2025 – Present**

- **Architected full-stack AI analytics platform** using TypeScript, Next.js 14, Node.js, FastAPI, Python, PostgreSQL, and Redis to ingest YouTube data (videos, transcripts, comments), perform GPT-5/GPT-4o analysis, and deliver actionable insights with 95%+ accuracy across 25+ database tables
- **Engineered multi-stage AI pipeline** integrating OpenAI GPT-5 for video/series analysis, implementing schema-validated JSON outputs, evidence-backed recommendations, asynchronous job orchestration with retry logic, and real-time progress tracking reducing analysis time from hours to seconds
- **Designed RESTful APIs and ETL workflows** with 20+ endpoints for channel management, video enrichment, series detection, and opportunity generation, implementing job reconciliation, caching strategies, and performance optimization serving millions of data points
- **Built responsive React/Next.js dashboard** with TanStack Query state management, Tailwind CSS, interactive data visualizations (Recharts), live analysis states, evidence drill-downs, and PDF export pipelines ensuring frontend-backend parity and reliability
- **Implemented advanced prompt engineering system** with structured JSON schemas, quality guards, and robust text builders converting insights into model-readable narratives, achieving cross-episode pattern recognition and aggregate recommendations for series-level intelligence
- **Deployed containerized microservices** using Docker, Docker Compose, and Turborepo monorepo architecture with PostgreSQL and Redis, establishing CI/CD workflows, environment-based configuration, and production debugging practices improving system reliability and deployment efficiency.

## SAP BASIS Consultant Team Lead | Infrabeat Technologies, India | Apr 2022 – Aug 2023

- Led SAP S/4HANA ERP implementations and migrations with a 100% success rate, reducing downtime by 15% and improving performance by 20%.
- Applied data-driven monitoring and predictive analytics to identify system bottlenecks, achieving a 25% increase in efficiency and 40% reduction in operational costs.
- Managed SAP HANA installations, patching, upgrades, and root-cause analyses.
- Collaborated with IT, finance, and HR stakeholders to identify improvements and implement system enhancements.
- Documented system architecture and SOPs for audits and team knowledge sharing.
- Guided architecture planning, ensuring scalability, security, and optimized load balancing.
- Mentored junior consultants, fostering knowledge-sharing and best practices.

## Associate SAP BASIS Consultant | Infrabeat Technologies, India | Feb 2021 – Apr 2022

- Provided SAP BASIS support across ECC6, Solution Manager, BI, CRM, EP.
- Managed system refreshes, client copies, SAP Note implementation, and kernel upgrades.
- Configured user roles, RFC connections, and disaster recovery setups.
- Collaborated with senior consultants to optimize SAP landscapes with data-driven insights.
- Managed user roles, authorizations, and access controls for secure SAP operations.

## Education

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### MSc Data Analytics

**University of Strathclyde, Glasgow, UK | Distinction**

Sept 2023 – Sept 2024

*Key Modules:* Data Management, Statistical Analysis, Predictive Modelling, Risk Analysis, Machine Learning, Python, Power BI

### Bachelor of Engineering – Information Technology

**Savitribai Phule Pune University, India | CGPA 6.1**

Jul 2016 – May 2021

*Key Modules:* DBMS, Software Engineering, Cloud Computing, Business Analytics, DSA, Computer Networks, Operating Systems, SDLC

## Key Projects

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- **AI Agent Chatbot (LangGraph + Groq + OpenAI + Tavily):** Built full-stack chatbot with LangGraph ReAct agents integrating Groq (Llama 3, Mixtral), GPT-4o-mini, and Tavily API for real-time web search. Deployed on Streamlit Cloud with multi-turn memory and error handling.[Live Demo](#)
- **Classifying regions by assessing countries' progress to their Sustainable Development Goals:** Applied PCA and K-means clustering to classify countries by UN Sustainable Development Goal progress, revealing global development patterns beyond traditional economic groupings through comprehensive statistical analysis.
- **NLP Analysis of NHS Training Materials:** Analysed NHS training content using spaCy for tokenization, NER, and topic modeling, identifying key themes in patient care and staff education to inform AI-driven healthcare tool development.
- **Bitcoin Price Prediction:** Predicted Bitcoin prices using regression models (Linear Regression, Random Forest, Gradient Boosting) and LSTM network, analysing data from various stock indexes. Integrated real-time data streams and sentiment analysis via Yahoo Finance API to enhance predictive accuracy, providing timely insights for the volatile cryptocurrency market.
- **Spotify Classification Problem:** Developed Random Forest regression model with feature engineering and ensemble methods achieving RMSE 7.5, outperforming baseline models in Kaggle competition.

## Other Skills & Certifications

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- SQL for Data Science, Preparing Data for Analysis with Excel, PowerBI Fundamentals



