

Abhijeet Kumar

Data Engineer | AI Solutions Developer

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Professional Summary

Results-driven Computer Science postgraduate (MSc, University of York) with hands-on expertise in data engineering, AI/ML, and high-performance computing. Proven success in automating business processes, forecasting demand using time-series models, and deploying generative AI solutions on the cloud. Passionate about building scalable, production-ready systems that convert complex data into actionable insights and measurable outcomes.

Experience

- **System Administrator (MIS & Data Engineering)**
Kalawati Enterprises (P&G Partners), 2024 – Present
 - Automated daily sales and inventory reports using Python (Pandas, NumPy), reducing manual workload by 60%.
 - Conducted trend analysis on multi-regional sales data, contributing to 30% growth in targeted product performance.
 - Designed and implemented ARIMA and LSTM models for accurate demand forecasting.
 - Built custom MIS dashboards for stakeholders, enhancing visibility and decision-making using internal KPIs.

Project Highlights

- **Route Optimization & Allocation Tool - Professional Project**
Python, Pandas, Scikit-learn, Geospatial Algorithms, Tkinter, TTKBootstrap
 - Automated assignment of uncovered locations based on distance threshold and business rules (e.g., prefix enforcement, distributor limits).
 - Significantly reduced manual effort and errors in route mapping by over **90%**, improving field coverage efficiency.
- **GPT-4 Powered Generative AI Chatbot – Personal Project**
 - Built a LangChain-based chatbot with OpenAI API, integrated with contextual memory and RAG.
 - Deployed using Docker + FastAPI on AWS EC2 for real-time query resolution.
 - Tech: Python, LangChain, OpenAI, FastAPI, Docker, AWS

➤ **Autonomous Robot Navigation Simulator – Academic Project**

- Developed a ROS-based simulation using Gazebo + TurtleBot, implementing dynamic obstacle avoidance.
- Tech: ROS, Python, Gazebo, C++, Linux

➤ **High-Performance Parallelization for Scientific Code – Academic Project**

- Optimized legacy code using CUDA & MPI, achieving 30x speed-up over serial baseline.
- Benchmarked performance using OpenMP vs CUDA frameworks.
- Tech: CUDA, MPI, OpenMP, C/C++

➤ **AI-Driven Snake Game Automation – Personal Project**

- Trained a neural network agent using genetic algorithms, achieving scores >100 after 500 generations.
- Tech: Python, Neural Networks, Genetic Algorithms

Education

➤ **University of York, UK**

MSc in Advanced Computer Science | Sept 2022 – Feb 2024

Modules: High-Performance Computing, Evolutionary Computation, User-Centered Design, Model-Driven Engineering

➤ **Savitribai Phule Pune University, India**

Bachelor of Engineering in Computer Engineering | Aug 2015 – Feb 2020

Courses: Software Development, OOP, Operating Systems, Engineering Mathematics

Technical Skills

- **Languages & Frameworks:** Python, C++, SQL, JavaScript, HTML/CSS, Flask, Django
- **Data & AI:** Pandas, NumPy, Scikit-learn, TensorFlow, ARIMA, LSTM, Neural Networks, Genetic Algorithms
- **Tools & Platforms:** Git, Jupyter, Docker, AWS EC2, FastAPI, VS Code, Eclipse, ROS
- **Cloud & DevOps:** CI/CD Pipelines, Cloud Storage, Docker Containers, Prompt Engineering
- **Other:** Data Engineering, Software Testing, Web Development, High-Performance Computing