

# ABHAY TIWARI

## AIML ENGINEER

📍 Hyderabad, Telangana

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✉️ Email

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🔗 Portfolio

## SUMMARY

Results-driven AI & Machine Learning Engineer with hands-on experience in data analysis, predictive modeling, and production deployment of machine learning and AI solutions. Proficient in Python, NLP, deep learning, and model optimization. Experienced in TensorFlow, PyTorch, Scikit-learn, and Pandas, with expertise in building scalable applications using Flask and REST APIs. Skilled in LangChain, LangGraph, LLMs, and RAG pipelines for intelligent agentic systems.

## TECHNICAL SKILLS AND INTERESTS

- **Programming Languages:** Python, JavaScript, Java, C, C++
- **Frontend:** HTML, CSS, React.js, Tailwind CSS, Bootstrap
- **Backend:** Flask & APIs, RESTful APIs, Supabase, MongoDB
- **Deployments & MLOps:** Git, GitHub, Docker, Apache Kafka, Cloud
- **Data Science & AIML:** AI, ML, Deep Learning, NLP, Scikit-learn, TensorFlow, PyTorch, LangChain, LangGraph, LLMs, RAG, Vector DBs, Pandas, NumPy
- **Core CSE Concepts:** DSA, OOPs, OS, DBMS, Computer Networks

## WORK EXPERIENCE

### AI & Full Stack Developer Intern — Infosys Springboard

Oct 2025 – Dec 2025

- Architected hybrid fraud detection engine for BFSI using Random Forest (Scikit-learn) and rule-based risk scoring, achieving 91.3% detection accuracy with 15+ engineered temporal and statistical fraud features.
- Developed scalable real-time monitoring platform using FastAPI, React.js, MongoDB Atlas, and Pydantic, integrating Gemini-based Explainable AI to convert model predictions into analyst-ready risk insights.
- Optimized analytics pipeline using Redis caching and Docker-based microservices deployment, reducing API latency by 40% and enabling high-performance real-time fraud monitoring dashboards.

## EDUCATION

### Vellore Institute of Technology, Chennai

Aug 2023 – Jul 2027

B.Tech Computer Science (AI & ML)

CGPA: 9.29

### Sri Chaitanya Junior Kalasala, Hyderabad (12th)

Jun 2021 – May 2023

Board of Secondary Education Telangana – 98.9%

### Shloka CBSE School (10th)

Apr 2020 – May 2021

Central Board of Secondary Education – 93.8%

## PROJECTS

### Data Preprocessing AI Agent ↗ (LangChain, Python, Feature Engineering, Automation)

- Developed an AI-powered data preprocessing agent using LangChain, automating tasks such as missing value imputation, encoding, and feature scaling through natural language interaction.
- Integrated FAISS-based vector storage with binary representations to enable dynamic, efficient, and scalable dataset handling.
- Implemented a transparent preprocessing pipeline with step-by-step reporting, enabling automated PDF report generation for improved reproducibility and documentation.

### Real-Time Logistics ML Pipeline ↗ (Apache Kafka, Machine Learning, Python, Docker)

- Engineered a real-time ML pipeline using Apache Kafka to ingest logistics data and generate on-the-fly predictions for anomaly detection, risk assessment, and maintenance forecasting.
- Built an interactive dashboard to visualize anomaly scores, risk probabilities, fuel consumption, and live data streams with dynamic visualizations.
- Deployed classification models via Flask APIs, enabling scalable risk monitoring, real-time updates, and actionable insights for logistics operations.

### Real-Time YouTube Analytics Dashboard ↗ (NLP, Real-Time Data Streaming, Data Visualization)

- Developed a real-time social media analytics tool using the YouTube Data API to retrieve and process video performance metrics including views, likes, comments, duration, and watch time.
- Applied Logistic Regression with TF-IDF vectorization for sentiment analysis and engagement rate classification, enhancing content performance insights.
- Designed a dynamic user interface enabling input of video links with real-time publishing analytics and interactive visualization of engagement trends.

## EXPERIENCE AND ACHIEVEMENTS

### Hackathons

- Frontend Battle 2.0 (IIT Bhubaneswar, Finalist) — Developed optimized and responsive frontend UI solution.
- Sustainovate Hackathon — Secured 5th position by building a blockchain-based decentralized application.
- Tutedude Buildathon 2025 – Built BloodConnection AI donor-matching platform with scalable backend APIs.

### Certifications

- Generative AI with Watsonx – IBM (2025)
- Oracle Certified Generative AI Professional (Aug 2025)
- Oracle Certified Cloud Database Services (Oct 2025)