ABHAY TIWARI

AIML ENGINEER

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• Portfolio

SUMMARY

AI/ML engineering student with hands-on experience in building and deploying machine learning models for real-world use cases. Skilled in Agentic AI and proficient with LangChain for developing intelligent agents. Strong foundation in Python, deep learning, NLP, and model evaluation. Experienced with frameworks like TensorFlow, PyTorch, Scikit-learn, and tools like Flask, Git, and RESTful APIs. Passionate about creating scalable and impactful AI solutions.

TECHNICAL SKILLS

- Python, JavaScript, Java HTML, CSS
- Neural Networks, NLP, C/C++
- Machine Learning, Deep Learning
- Scikit-learn, Git, GitHub
- Docker, RESTful API's, DSA
- RAG Pipelines, Vector Database
- Artificial Intelligence, LangChain
- Supabase, MongoDB, Apache Kafka
- TensorFlow, PyTorch, Teamwork
- Flask & Flask API, React.js, Team Management
- Large Language Models (LLMs)
- APIs & Tools

PROJECTS

Credit Card Fraud Detection using Autoencoders GitHub Repo

- Built an unsupervised deep learning model using autoencoders for fraud detection.
- Applied advanced feature engineering (temporal, geospatial, rolling statistics).
- Achieved low reconstruction error (Training Loss: 0.2362, Validation Loss: 0.1302).
- Used threshold-based anomaly detection (threshold = 0.38) to identify fraudulent transactions.

Data Preprocessing AI Agent GitHub Repo

- Created a LangChain-powered AI agent to automate dataset preprocessing.
- Handled tasks like missing value imputation, encoding, and scaling via natural language.
- Integrated with FAISS, and local vector storage for dynamic responses.
- Provides a step-by-step, explainable preprocessing pipeline for transparency.
- Outputs cleaned datasets and generates a downloadable PDF report summarizing preprocessing steps.

Real-Time Logistics ML Pipeline GitHub Repo

- Built an ML pipeline using Apache Kafka for real-time logistics data ingestion and prediction.
- Developed a live dashboard to monitor anomaly scores, risk levels, maintenance probability, and fuel consumption.
- Deployed classification models via Flask APIs to assess vehicle risk and maintenance needs.
- Enabled real-time updates, raw data view, and interactive controls for dynamic visualization.

Real-Time YouTube Analytics Dashboard GitHub Repo

- Built using YouTube Data API to fetch and analyze video performance dynamically.
- Displays video metadata, views, likes, comments, duration, and watch time.
- Used Logistic Regression and TF-IDF vectorization for sentiment analysis and engagement rate classification.
- Features an interactive UI for dynamic video link input and real-time publishing insights.

EDUCATION

B.Tech in Artificial Intelligence & Machine Learning **Aug 2023 – Present**

Vellore Institute of Technology, Chennai

- Coursework includes Machine Learning, Deep Learning, Data Structures, and Agentic AI.
- Actively working on AI projects involving LangChain, NLP, and real-time analytics.

Higher Secondary Education **Jun 2021 – May 2023**

Sri Chaitanya Junior Kalasala

- Focused on Mathematics, Physics, and Chemistry.

CERTIFICATIONS

- **Generative AI with watsonx -** Issued by IBM | 2025
- **Generative AI with Diffusion Models -** AWS Training & Certification | June 2025

ADDITIONAL INFORMATION

- **Soft Skills:** Problem Solving, Team Collaboration, Time Management, Communication, Critical Thinking, Agile Development
- **Languages:** English, Hindi
- **Certifications:** IBM Generative AI, Infosys AI, Machine Learning and Deep Learning.
- **Awards/Activities:** Finalist in CodeFolio Competition – Top 30 Selection, Secured Top 5 in Sustainovate'25 Hackathon, Secured 4th position in Buildathon Hackathon.