Maithili Sharma

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Software / AI Engineer | Full-Stack & Applied ML Systems

Software / AI Engineer with hands-on experience building **production-style software systems** that integrate machine learning and LLM-based components. Strong foundation in data structures, backend APIs, data pipelines, and system design, with applied projects across finance, analytics, and developer tooling. Comfortable writing clean and maintainable code, and continuously improving solutions through feedback and iteration.

Education

~ Vishwakarma University, PuneB.Tech in Artificial Intelligence and Data Science (2022 - 2026) | 8.86 CGPA

Relevant Coursework: *Artificial Intelligence, Machine Learning, Deep Learning, Probability & Statistics, Data Structures & Algorithms, Data Science, Financial Modeling, Data Warehousing, Statistical Modeling*

~ City International School (CBSE)

Science Stream (Math, Physics, Chemistry, Biology) | 2019 - 2021 | 85%

Technical Skills

Programming & Core: Python, C++, Java, SQL, JavaScript, HTML, CSS, Object-Oriented Programming (OOP), Git, REST APIs, Backend Integration, Data Structures & Algorithms

Artificial Intelligence & Machine Learning: Machine Learning, Deep Learning, NLP, LLMs, RAG, Time-Series Forecasting, Model Evaluation & Optimization

Frameworks & Libraries: Scikit-learn, TensorFlow, Pandas, NumPy, SciPy, OpenCV, NLTK, TextBlob, Matplotlib, Seaborn, ReactJS, NodeJS

Data & Databases: PostgreSQL, MongoDB, Vector Databases (FAISS, Chroma), ETL Pipelines

Tools & Platforms: Flask, Streamlit, Power BI, Tableau, OpenAI API, n8n, CrewAI, Make, Lovable, Replit, Cursor, Financial APIs

Experience

Software Engineering Intern | AI Engineer | Infinity Pool | Present

Designed and implemented **backend software features** integrating machine learning and LLM-based components into production workflows. Built modular data preprocessing pipelines and **REST APIs** for model inference. Improved system reliability through **structured error analysis**, performance evaluation, and iterative optimization. Collaborated with engineering teams using **Git-based workflows and code reviews**.

Data Analyst Intern | Pianalytix | Mar 2025 – Present

Built **data pipelines** using SQL and Excel for structured and semi-structured datasets. Performed **data preprocessing and automation** using Python (Pandas, NumPy). Designed **Power BI dashboards** to support

data-driven decision-making. Worked with **MongoDB** for querying large-scale unstructured data. Translated business requirements into analytical and AI-ready datasets

Social Media Data Analyst | Capitall | Jun 2024 - Sep 2024

Analyzed social media data to extract **engagement, reach, CTR, and sentiment insights.** Applied **NLP-based sentiment analysis** using NLTK and TextBlob. Built **ML-based trend prediction models** for content performance forecasting. Created automated dashboards using **Power BI, Python, and Excel**. Delivered actionable insights to improve marketing strategy and audience targeting

Projects

1.AI-Powered Personal Finance Assistant

Developed an end-to-end machine learning system to classify transactions and predict spending behavior. Implemented classification and anomaly detection models using Scikit-learn. Performed feature engineering and data normalization on financial datasets. Built an interactive dashboard using Flask and Power BI/Tableau. Version-controlled codebase using Git and followed modular ML pipeline design

2. Volatility Trading Assistant (AI-Driven Quant System)

Developed an AI-based trading assistant to forecast market volatility and support automated trading decisions. Implemented time-series forecasting models including ARIMA and MGARCH. Built a Python backtesting engine for strategy evaluation. Integrated market data pipelines using Quandl API. Visualized model outputs and risk metrics using Matplotlib and Power BI

3. SDLC Assistant (AI-Powered Engineering Intelligence Tool)

Built an AI-driven SDLC assistant to analyze software repositories and evaluate system architecture. Used LLM-based and NLP techniques to extract insights from codebases, documentation, and configuration files. Designed logic to analyze deployment setups, cloud resource usage, and cost inefficiencies. Generated automated reports with recommendations for scalability, reliability, and optimization

4. RAG-Based Medical Chatbot

Designed and implemented a Retrieval-Augmented Generation (RAG) medical chatbot. Built document ingestion, chunking, embedding, and retrieval pipelines. Used vector databases to fetch relevant medical context before response generation. Ensured hallucination control by restricting outputs strictly to retrieved documents. Developed a web-based interface for secure document upload and querying