BRIJESH SINGH

Hyderabad, India
Email: brijesh7146@gmail.com | Phone: +91 9542913237
LinkedIn: linkedin.com/in/brijesh-singh-b84275307
GitHub: github.com/Brijesh1656
Portfolio: https://brijeshsingh-ai.netlify.app

PROFESSIONAL SUMMARY

AI & Machine Learning engineer with a focus on predictive analytics, real-time data processing, and intelligent automation.
Experienced in building end-to-end ML pipelines, FastAPI backend systems, simulation-driven industrial analytics, and multi-modal AI applications.
Skilled in Python, scikit-learn, FastAPI, SQL, and cloud deployment. Strong interest in applying AI to industrial operations, manufacturing efficiency, and automated decision systems.

EDUCATION

Bachelor of Business Administration (Business Analytics & Finance)
ROOTS Collegium, Hyderabad — *Expected 2026*

CERTIFICATIONS

IBM Data Science Professional Certificate (2024)
Python, Data Analytics, Machine Learning

TECHNICAL PROJECTS

SMART FACTORY ANALYTICS PLATFORM — AI-POWERED INDUSTRIAL SIMULATION SYSTEM

Python, FastAPI, scikit-learn, React, Next.js, TypeScript, SQL, Docker

- Built a full predictive maintenance platform using synthetic industrial sensor data (103,680 samples generated via simulator).
- Trained a Random Forest failure-prediction model achieving **97.91% classification accuracy**, plus separate yield-prediction and anomaly-detection models (K-Means).
- Developed a FastAPI microservice architecture powering ML inference, analytics, alerting, and data pipelines.
- Engineered a real-time dashboard (Next.js + TypeScript) displaying machine health, failure probability, anomalies, yield efficiency, and optimization opportunities.
- Designed SQL schemas and ETL processes for logging predictions, storing time-series data, and generating aggregated metrics.
- Implemented multi-machine simulation engine to mimic distributed industrial workloads and continuous data streams.
- Added notification system for automated maintenance recommendations and anomaly alerts.
- Deployable with Docker; structured for future load testing and latency profiling (Locust / k6 ready).

MATH PROFESSOR AI — AGENTIC RAG EDUCATION PLATFORM

Python, FastAPI, RAG, LangChain, LLM APIs, React, Vercel

- Designed a Retrieval-Augmented Generation system for step-by-step math tutoring.
- Implemented optimized query routing and document chunking for faster contextual retrieval.
- Built human-in-the-loop feedback workflow improving output quality over repeated sessions.
- Integrated a React front-end for student interaction with topic-level analytics and explanations.
- Live: https://math-professor-agent-k6h4.vercel.app

STOCK ANALYSIS PRO - FINANCIAL ANALYSIS & BACKTESTING

- Built real-time analysis platform with 6+ trading indicators (RSI, MACD, Bollinger Bands, etc.)
- Designed backtesting engine evaluating strategies via Sharpe ratio and drawdown
- Integrated Ollama Llama Vision AI for trend detection
- Live: https://stock-analysispro.streamlit.app.

FINVISION — AI FINANCIAL ANALYST

Python, Streamlit, ETL, ML, NLP

- Automated financial report parsing using custom ETL and text processing pipelines.
- Extracted key financial metrics (ratios, trends, risk markers) and generated insights with rule-based + ML hybrid logic.
- Reduced analysis time significantly by fully automating multi-document ingestion.
- Live: https://finvision-g.streamlit.app

GEMINI AI ASSISTANT — MULTI-MODAL DOCUMENT & IMAGE ANALYSIS

Python, Google Gemini API, Streamlit

- Built high-throughput pipeline for text, tables, and image extraction from multi-page PDFs.
- Achieved strong parsing accuracy across invoices, academic documents, and structured tables.
- Deployed as a cloud application with support for multi-modal inputs.
- Live: https://geminiflow.streamlit.app

TECHNICAL SKILLS

Languages: Python, SQL, TypeScript, JavaScript
ML & AI: Random Forest, Gradient Boosting, K-Means, Isolation Forest, Predictive Maintenance, Time-Series Analysis, RAG
Data Engineering: Pandas, NumPy, ETL Pipelines, Feature Engineering, Power BI
Backend: FastAPI, REST APIs, Microservices, Async Processing
Frontend: React, Next.js, Tailwind CSS, Streamlit
Tools: Git/GitHub, Docker, Linux, CI/CD
Cloud & Deployment: Google Cloud, Vercel, Streamlit Cloud

ADDITIONAL INFORMATION

Languages: English (Professional), Hindi (Native)
Interests: Industrial Analytics, Semiconductor Manufacturing, AI Systems Engineering