

Tashon Braganca

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Education

MVJ College of Engineering

B.E. in Data Science

Bengaluru, Karnataka

Nov 2022 – Present

- Relevant Coursework: Machine Learning, DSA, Linear Algebra, NLP, Databases

Projects

Alpha13 — Multi-Factor Signal Pipeline

[GitHub](#)

- Engineered trading signals using FinBERT sentiment & options IV in an XGBoost ensemble.
- Achieved **3.4x Sharpe Ratio** and **+7.3% return** in backtests; outperformed MACD, RSI baselines.
- Validated alpha using **Fama-French regression**; low multi-factor exposure confirms signal uniqueness.

Medicio AI — Offline LLM Health Assistant

[GitHub](#)

- Built a **fully offline** health chatbot using LLaMA3 and Transformers for private Q&A on text/image reports.
- Deployed Flask & Gradio stack with MongoDB backend, achieving **<2.5s latency** on local CPU.
- Used vision encoders + CLIP for image diagnostics and multi-modal QA.

RAG Q&A Bot — Semantic Search over Docs

[GitHub](#)

- Built a real-time QA system using LangChain + Pinecone with chunked PDF ingestion and vector embeddings.
- Delivered **>90% semantic match accuracy** in user testing; integrated streaming answers via Streamlit.
- Handled 50+ documents with under 3s retrieval on average; enabled persistent context via Redis caching.

Player Tracker — Re-ID for Sports Analytics

[GitHub](#)

- Used YOLOv11 + DeepSORT to track players in match footage and achieved **85%+ ID consistency** with Kalman filtering.

ImaGen — Local AI Image Generator

[GitHub](#)

- Used Latent Consistency Models and LLaMA prompts to generate 512×512 images **under 60s** locally, fully offline.

Insurance Predictor — ML App for Nano-Entrepreneurs

[GitHub](#)

- Used Flask + Scikit-learn to predict insurance costs with **91% R²**; included automated MLOps retraining loop.

Technical Skills

Languages: Python, SQL, C++, HTML/CSS

Frameworks & Libraries: Pandas, NumPy, PyTorch, TensorFlow, Scikit-learn, LangChain, Flask, FastAPI, React.js, Next.js, Gradio, Streamlit, HuggingFace, Vectorbt, Statsmodels, OpenCV

Machine Learning: Ensemble (XGBoost), RAG, LLMs (LLaMA, FinBERT), Prompt Engineering, NLP, CV (YOLOv11, Tracking), Kalman Filter, Diffusion Models

Tools & Platforms: Git, Docker, Ollama, Pinecone, OpenAI API, MongoDB, yFinance, Jupyter, VS Code, Postman

Certificates

- Supervised ML (Regression & Classification) – Stanford / DeepLearning.AI, Jun 2025
- NextGen AI Connect – Microsoft Luxor, Bangalore, May 2025
- SYNTHACK Hackathon Finalist – IEEE CS SB, DSATM, Apr 2025
- IIT-B AI Hackathon Participant – IIT Bangalore, 2024