MEVIN JOSE | mjenius1357@gmail.com | +91 9902932228 |

Portfolio | GitHub | LinkedIn

SUMMARY

AI/ML undergraduate building production ML systems across 30K+ SKU forecasting, real-time CV (<100ms), and reinforcement learning optimization, with strong focus on evaluation, monitoring, and scalable API-driven deployment.

EDUCATION

PES University — B.Tech in Computer Science (Artificial Intelligence and Machine Learning) | Aug 2023 – May 2027

EXPERIENCE

Web Development Intern — Superhhero Learning (*EdTech Startup*) | Jul–Sep 2025

- Built and deployed a MERN landing platform supporting **100+ users** for an early-stage EdTech startup
- Optimized backend APIs, reducing iteration time by **25%** and improving load time by **10%**

Tech: React, Node.js, Express, MongoDB, REST APIs, Vercel

PROJECTS

Demand Forecasting ML System (*End-to-End ML Pipeline)*

- Built and deployed a hybrid ML + statistical forecasting system for **30K+ SKU-level time series** with time-based cross-validation and baseline comparison (Moving Average vs. LightGBM).
- Reduced MAE by **~25%** via automated drift detection, model registry, and production monitoring.

Tech: Python, LightGBM, FastAPI, Pandas, NumPy, SciPy, SQLite, Parquet

AEGIS — Tamper-Resistant Surveillance System *(Top-10 Kodikon Hackathon)*

- Built a **real-time CV** pipeline using optical flow + heuristic anomaly detection to identify blur, glare, blackout, and replay attacks in CCTV streams.
- Achieved **<2%** false positives with **<100ms** detection latency on live CCTV streams, integrating cryptographic HMAC watermark validation to prevent replay and feed-tampering attacks.

Tech: Python, OpenCV, Flask, Socket.IO, ffmpeg, SQLite

Adaptive Traffic-Signal Control (PPO + SUMO)

- Trained a **PPO-based RL agent** in SUMO using Stable-Baselines3 and benchmarked against fixed-time and rule-based controllers for emergency routing under high-traffic simulation scenarios.
- Reduced emergency travel time by **10.6% (trucks), 4.2% (cars), 3.4% (bikes)**.
  Tech: Python, Stable-Baselines3, SUMO, Pandas, NumPy

Football Recruitment & Scouting Decision Support System (API-Driven ML Platform)

- Built a **FastAPI + SQLite** ML system for **3,364 players across 9 leagues** using weighted cosine similarity, **K-Means (Silhouette 0.38–0.45**), and **RandomForest valuation (R^2≈0.75–0.82**)
- Implemented league-aware imputation, positional scaling, **SHAP explainability**, and precomputed similarity with **<100ms** API latency (Dockerized)
  Tech: Python, FastAPI, Scikit-learn, SHAP, Pandas, NumPy, Streamlit, Docker, GitHub Actions

KEY SKILLS

- **Languages: Python, JavaScript/TypeScript, SQL, Java, C, R**
- **Frameworks: FastAPI, Flask, React, Node.js, Express, REST APIs, WebSockets**
- **ML: LightGBM, Scikit-learn, PyTorch, OpenCV, SHAP, Stable-Baselines3, NumPy, Pandas**
- **Databases: PostgreSQL, MongoDB, SQLite, Parquet. MySQL**
- **DevOps: Docker, GitHub Actions, CI/CD, Vercel, Linux**

CERTIFICATIONS

Google Data Analytics • Meta GenAI • Microsoft Computer Vision • Kaggle ML & DL