MEVIN JOSE

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GitHub: https://github.com/MJenius | **Portfolio:** https://mjenius.github.io/Portfolio/

SUMMARY

Software & AI/ML engineering student skilled in building scalable backend systems, ML pipelines, real-time CV applications, and reinforcement learning agents. Top-10 out of 280 teams at Kodikon for developing AEGIS, a tamper-resistant surveillance system. Strong in Python, FastAPI, React/Node, and distributed systems concepts.

EXPERIENCE

Web Development Intern — Superhhero Learning | Jul–Sep 2025

- Developed and deployed a production **MERN** landing platform receiving ~100 monthly users.
- Integrated APIs and improved workflow efficiency, reducing development time **25%**.
- Optimized backend performance and caching, improving load time **10%** for deployed traffic.
  Tech: React, Node.js, Express, MongoDB, REST APIs,Vercel Auto-Deploy

PROJECTS

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

Real-time CV system securing CCTV feeds using **HMAC-SHA256 watermarks**, tamper detection (blur, shake, glare, blackout), and incident logging.

- Achieved **<2%** false positives and **<100ms** detection latency across live camera streams.
- Processed high-volume frame data; built glare rescue (CLAHE) and flow-based reposition detection.
  Link: https://github.com/ZeroDeaths7/AegisAI-tamper-resistent-surveillance-system
  Tech: Python, OpenCV, Flask, Socket.IO, ffmpeg, SQLite

Adaptive Traffic-Signal Control (PPO + SUMO)

RL system optimizing emergency routing using **PPO**, trained on a large Bangalore traffic dataset.

- Reduced emergency travel time **10.6%**; trucks **4.2%**, cars **3.4%**, bikes **1.2%**.
- Built SUMO environments, PPO agent, training/eval pipelines, and analytics visualizations.
  Link: https://github.com/rajeev8008/sumo-traffic-rl-project
  Tech: Python, Stable-Baselines3, SUMO, Pandas, NumPy

PDF Extraction Playground

Full-stack multi-model PDF extraction platform (Surya, Docling, MinerU) with PyMuPDF fallback.

- Achieved **99% extraction accuracy** and **35% faster** processing with optimized pipelines.
- Deployed via Modal + Vercel auto-CI workflows.
  Link: https://pdf-playground-8wlek8vg8-mevin-joses-projects.vercel.app/
  Tech: FastAPI, Next.js, PyMuPDF, Modal, Vercel

AI Voice Assistant for LeetCode

NLP assistant enabling natural-language LeetCode queries.

- Automated **50+** query types; improved understanding accuracy **30%** over rule-based flow.
  Link: https://github.com/MJenius/Leetcode-Voice-Assistant-AI
  Tech: Python, spaCy, ElevenLabs API

SKILLS

- AI/ML & Data: Machine Learning, Deep Learning, Generative AI, NLP, Computer Vision, Image Analysis, Data Analysis, Data Processing, Data Validation, Business Analytics, Tableau, Excel
- Software & Cloud: FastAPI, Node.js, Express, REST APIs, Software Development, Cloud Computing (Azure), Vercel Deploy, Distributed Systems Concepts
- Programming & Tools: Python, JavaScript/TypeScript, SQL, C, Java, Pandas, NumPy, Git, TensorBoard, Google Colab

CERTIFICATIONS

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