

# MEVIN JOSE

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

## SUMMARY

Software & AI/ML engineering student at PES University (B.Tech, 2023–2027) skilled in 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. Experienced with model deployment, data pipeline automation, CI/CD (GitHub Actions, Vercel), testing (PyTest, unit/integration), and model development using PyTorch & TensorFlow.

## EXPERIENCE

### Web Development Intern — Superhero 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-resistant-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

## KEY SKILLS

- **Programming Languages:** Python, JavaScript/TypeScript, SQL, C, Java
- **Frameworks & Libraries:** FastAPI, Flask, React, Node.js, Express, Next.js, Pandas, NumPy, PyTorch, TensorFlow
- **AI/ML & Data Science:** Machine Learning, Deep Learning, NLP, Computer Vision, Generative AI, Reinforcement Learning, Model Deployment, Model Monitoring, Evaluation (Precision, Recall, F1, AUROC), Data Analysis, Data Pipeline Automation, Data Analysis, Data Visualization
- **Software Engineering & Tools:** GitHub Actions, Vercel CI/CD, Modal Auto-Deploy, PyTest, Unit/Integration Testing, Agile Workflows (Jira), REST APIs, SQLite, MongoDB, PostgreSQL System Design, API Optimization, Agile Collaboration, Software Testing, CI/CD Pipelines
- **Cloud & Analytics:** Microsoft Azure, Tableau, Excel, Google Colab, TensorBoard

## CERTIFICATIONS

[Google Data Analytics](#) • [IBM Generative AI](#) • [Meta GenAI](#) • [Microsoft Computer Vision](#) • [Kaggle ML & DL](#)