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Github | Portfolio

SUMMARY

AI/ML and Software Engineering student at PES University (2023–2027) with hands-on experience designing and deploying real-time computer vision applications, and end-to-end ML pipelines in production environments. Proficient in Python, FastAPI, Node.js, React, TensorFlow, and PyTorch, with strong foundations in system design, microservices, RESTful APIs, CI/CD automation, and cloud deployment (Vercel, Modal). Skilled in data-driven development, MLOps, and API performance optimization. Passionate about building high-performance software that integrates AI innovation and clean engineering practices to deliver measurable impact.

EXPERIENCE

Web Development Intern — Superhhero Learning | Jul–Sep 2025

- Developed and deployed a MERN-based landing platform with **~100** active monthly users.
- Optimized API workflows, reducing development time by **25%.**
- Enhanced backend caching to improve load times by **10%.**

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

PROJECTS

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

End-to-end retail demand forecasting system with hybrid ML modeling, monitoring, and auto-retraining.

- Deployed hybrid ML + statistical forecasting for **30k+** SKU–store time series **(↓25% MAE**).
- Implemented **drift detection** & model versioning for production-safe retraining.

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

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

Real-time CV platform protecting CCTV feeds using HMAC-SHA256 watermarks, multi-sensor tamper detection (blur, glare, shake, blackout), and event logging.

- Achieved **<2%** false positives and **<100ms** detection latency across live camera streams.
- Implemented **glare rescue (CLAHE)** and optical-flow reposition detection for robustness.

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%**.
  Automated training/evaluation pipelines using SUMO + PPO.
  Tech: Python, Stable-Baselines3, SUMO, Pandas, NumPy

DocParse AI – Intelligent PDF Extraction Platform

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

- Reached **99% extraction accuracy** and **35% faster** processing with optimized pipelines.
- Automated deployment using Modal and Vercel CI/CD workflows.
  Tech: FastAPI, Next.js, PyMuPDF, Modal, Vercel

KEY SKILLS

- **Languages: Python, JavaScript/TypeScript, SQL, Java, C, R**
- **Frameworks & Libraries: FastAPI, Flask, React, Node.js, Express, Next.js, PyTorch, TensorFlow, Scikit-Learn, OpenCV, Pandas, NumPy**
- **Software Engineering: RESTful APIs, Microservices, System Design, Version Control (Git/GitHub), Docker, Testing (PyTest, Unit & Integration), CI/CD (GitHub Actions, Vercel, Modal), Agile, Jira**
- **AI/ML & Data Science: Machine Learning, Deep Learning, Computer Vision, NLP, Generative AI, Reinforcement Learning, MLOps, Model Deployment, Model Monitoring & Evaluation, Data Pipeline Automation**
- **Cloud & Databases: PostgreSQL, MongoDB, SQLite, Tableau, TensorBoard**

CERTIFICATIONS

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