NEVIL J

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AI & DATA SCIENCE STUDENT AI & Data Science | Computer Vision + ML Intern | Building for RealWorld Impact

SUMMARY

I'm currently pursuing my **B.Tech in Artificial Intelligence & Data Science** at KGiSL Institute of Technology (2023–2027).

I'm passionate about solving real-world problems in **traffic**, **healthcare**, and **research automation** through intelligent AI systems. I work across the full stack—from building **ML models** to deploying **interactive web apps**.

Core Interests:

- Vision-Language Models for medical image interpretation
- Real-time CV systems using YOLO, OpenCV, and IoT (ESP32-CAM)
- Document Intelligence using BERT, NLP, and Prompt Engineering
- Building full-stack AI systems with responsive UIs

EDUCATION

B.Tech – Artificial Intelligence & Data Science

KGiSL Institute of Technology (2024 – 2027)

CGPA-7.1

TECHNICAL SKILLS

Technical Skills

- Languages: Python, JavaScript, HTML/CSS
- Tools & Frameworks: YOLOv8, TensorFlow, Keras, OpenCV, Flask, Flutter, PostgreSQL, Firebase
- AI/ML Concepts: Object Detection, Deep Learning, Model Training, Image Processing • Other: Git, Github, Figma (UI Design), Android Studio, VS Code

PROJECTS

AI-Based Traffic Management System (https://github.com/nevil2006/AI-Based-Smart-Traffic-Management-System-with-Emergency-Vehicle-Prioritization)

Technologies: YOLOv5, ESP32-CAM, BeagleBone Black, Python, OpenCV

Duration: Jan 2024 – May 2024

- Built a real-time vehicle detection and lane-based traffic control system.

- Trained custom YOLOv5 model using real traffic footage under varying weather conditions.

- Integrated ESP32-CAM for live data input and BeagleBone Black for on-device inference.

- Won 1st Prize at Ideathon & Project Expo, and received approval from the Coimbatore Police Commissioner for prototype use.

Eco-Friendly Website – HTML/CSS Frontend (https://github.com/nevil2006/eco-friendly-website-frontened)

- Features: Fast & lightweight (minimal code, no heavy animations), Green color palette (nature-themed)

- Sections: Home, About, Tips, Contact

Awards/Activities:

- 1st Prize – Ideathon Project Expo (2024) — Won for developing a real-time AI-based Traffic Management System using YOLOv5 and embedded hardware (ESP32-CAM + BeagleBone Black).

- 1st Prize – Project Expo SNS Institute of Technology (2024) — Recognized for innovation in integrating Computer Vision and IoT in urban traffic systems.

- Project Approved by Commissioner of Police, Coimbatore (2024) — Smart traffic control solution officially acknowledged for potential deployment.

Experience:

CMLI (AI Research) – Vision-Language Intern *(Jun–Jul 2025)*

- Worked on **multimodal AI systems** combining Computer Vision and NLP.
- Experimented with **image-text embeddings** (CLIP-style models) for semantic understanding.
- Conducted literature survey on **vision-language alignment** and fine-tuned models on custom datasets.
- Contributed to research documentation and reproducible experiments.

hizen.ai – ML Intern (Research Automation) *(Dec 2024 – Feb 2025)*

- Built **automation pipelines** for ML research experiments, reducing manual setup.
- Implemented **data preprocessing scripts** in Python to streamline experiments.
- Assisted in prototyping **ML-based automation agents** for internal workflows.
- Gained exposure to working in a **fast-paced AI startup environment**.

SaiKet Systems – ML Intern (EDA & Random Forests) *(Dec 2024 – Jan 2025)*

- Performed **Exploratory Data Analysis (EDA)** on large structured datasets.
- Designed **feature engineering pipelines** to improve model performance.
- Implemented and optimized **Random Forest classifiers** for prediction tasks.
- Presented findings in concise reports for decision-making.