NEVIL J

Coimbatore, Tamil Nadu, India

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PROFESSIONAL SUMMARY

AI & Data Science engineer specializing in **Computer Vision, Deep Learning, and Vision-Language Models**, with hands-on experience in real-time detection systems, NLP pipelines, and multimodal AI. Proven record in research-driven ML applications and production-ready deployment. **National-Level Hackathon Winner (2025)** recognized for innovation in smart city solutions. Passionate about bridging AI research with practical applications in healthcare, automation, and IoT.

TECHNICAL SKILLS

- **Languages:** Python, HTML, CSS, SQL, JavaScript
- **ML/DL:** TensorFlow, PyTorch, Scikit-learn, YOLO, CLIP, BERT, Neural Networks, Deep Learning
- **Computer Vision:** OpenCV, Image Classification, Object Detection, Video Analytics, IoT Integration
- **Data Science:** Data Analysis, EDA, Feature Engineering, Statistical Modeling, Pandas, NumPy, Matplotlib
- **Tools:** VSCode, Jupyter, Git, Docker, Firebase, Linux, Colab
- **Specializations:** Vision-Language Models, Medical Image Analysis, Model Deployment, API Development, Cloud Computing (Streamlit, Replit)

EXPERIENCE

Vision-Language Intern, CMLI   Jun 2024 – Jul 2024

- Fine-tuned CLIP models on 5K histopathology images, improving classification accuracy by 9%.
- Engineered explainability pipelines to visualize model attention on pathology features.
- Documented reproducible ML workflows for zero/few-shot learning experiments.

ML Intern – Research Automation, hizen.ai   Dec 2024 – Feb 2025

- Automated research paper summarization using BERT, processing 1K+ papers with 87% precision.
- Implemented topic modeling and information retrieval, reducing manual review time by 60%.

ML Intern – EDA & Random Forests, SaiKet Systems   Dec 2024 – Jan 2025

- Conducted EDA and Random Forest classification on 10K+ records; achieved 91% accuracy.
- Presented interpretable feature-importance results to technical stakeholders.

SELECTED PROJECTS

AI-Based Smart Traffic Management (GitHub)
YOLOv5, ESP32-CAM, BeagleBone Black, OpenCV

- Designed real-time vehicle detection system achieving 92% accuracy at 30 FPS.
- Reduced average lane waiting time by 35% through adaptive traffic signal control.
- Won **1st Prize at National-Level Hackathon (2025)**; prototype approved by Police Commissioner.

Breast Cancer Subtype Classification (GitHub)
CLIP, ResNet50, PyTorch

- Implemented zero/few-shot image classification achieving 88% F1-score.
- Delivered explainability visualizations for clinical interpretability.

Document Masking Tool (GitHub)
Python, Flask, OpenCV, OCR

- Developed web app to automatically detect and redact sensitive text fields from documents.
- Deployed on Streamlit with RESTful API endpoints for integration.

EDUCATION

KGiSL Institute of Technology, Coimbatore, India
B.Tech in Artificial Intelligence & Data Science   Sep 2023 – May 2027
CGPA: 7.1 / 10

Chavara Vidya Bhavan, India
Higher Secondary Education   Jul 2019 – Feb 2023

Awards & Recognition

- **1st Prize – National Level Hackathon (2025)** among 100+ teams for Smart Traffic Management AI.
- **1st Prize – Ideathon (2024)** and **Project Expo (2024)** for AI/Healthcare innovations.
- **Project Approval** – Smart traffic prototype approved by Commissioner of Police for pilot use.
- **Distinctions** – Grade 1 Performance & Grade 2 Theory in Music (Trinity College, London).

Additional Information

Open to internships and research collaborations in **Computer Vision, Deep Learning, Vision-Language Models, and Applied AI**. References available upon request.