Colin Michael D'Rozario

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Experience

Software Development Intern — ivPro Technologies — December 2025 – Present
Coimbatore, India
Tech Stack: Python, OpenCV, PyTorch, YOLO, RTSP, FastAPI, ONNX

- Implemented AI-driven surveillance features including human/object-aware motion detection, zone-based intrusion alerts, and AI-tagged event metadata for CCTV and NVR systems.
- Optimized YOLO-based detection in RTSP pipelines, achieving 92%+ accuracy and reducing false alerts by −30% via temporal filtering and confidence calibration.

AI Intern — SolutionChamps Technologies — April 2025 – June 2025
Coimbatore, India
Tech Stack: Python, OpenCV, Roboflow, NLTK, spaCy

- Led dataset collection, cleaning, augmentation, and annotation, improving dataset robustness by ∼25%.
- Fine-tuned a transformer-based LLM for real-time wildlife, fire, and threat detection, achieving 94.5% accuracy and 92.4% recall.
- Built NLP pipelines for ranger report analysis, enabling automated alert categorization with 90%+ F1-score.

Projects

TruLogo – AI-Powered Logo Analysis & Trademark Risk Platform
Tech: Python, FastAPI, PyTorch, FAISS, OpenCV, Next.js

- Built an end-to-end logo similarity and trademark risk analysis system using deep visual embeddings and vector search.
- Implemented FAISS-based ANN retrieval, reducing logo comparison latency by ∼70% while maintaining high similarity accuracy.
- Enhanced a scalable FastAPI backend and Next.js dashboard to visualize similarity scores and risk insights.

MindTrace – Wearable Memory Assistant for Smart Glasses
Tech: Python (FastAPI), React, PyTorch, InsightFace, Faster Whisper, LangChain

- Developed a real-time wearable AI assistant combining face recognition and speech transcription for live identity recall.
- Integrated LangChain and vector search to generate conversation summaries, reminders, and emergency SOS alerts.
- Engineered a web dashboard that consolidates detection data and conversation logs, facilitating enhanced decision-making.

Education

XIM University — July 2025 – Present
B.Tech in Computer Science
CGPA: 8.57*/10
Achievements: Co-ordinator - XPLORE, Computing Society of XIM University - Managed cross-functional teams to plan and execute technical events, workshops, and student-led innovation initiatives.

Skills

- **Languages:** Python, JavaScript, Java, C/C++
- **Frameworks:** React, NodeJS, Flask, Streamlit, PyTorch, Keras, Tensorflow,
- **Cloud & DevOps:** Docker, Kubernetes, Terraform, Linux
- **Databases & Tools:** PostgreSQL, MongoDB, Git, GitHub, Bash, LaTeX

Certifications

- AI Mastery 2025 – School of AI, Udemy
- Data Engineering -ETL, Webscrapping, Big Data, SQL, Power-BI – Bluelime Learning Solutions, Udemy
- TensorFlow 2: Deep Learning and Artificial Intelligence 2025 – Lazy Programmer Inc., Udemy