Allan Emmanuel B. UMALI, ECE, ECT

Applied AI & Computer Vision

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SUMMARY

AI specialist who takes agentic-AI systems from first idea to production, including evaluation harnesses, guardrails, and LLM cost routing. Founding engineer and team lead of KDCI's AI team. First author at IEEE FMLDS 2026 (Kobe). Licensed ECE/ECT engineer (85.70%, among the top ratings of De La Salle University takers). Six years of experience in AI, computer vision, MLOps, and data engineering.

EXPERIENCE

KDCI (Key Discovery Consulting, Inc.) Pasig City, Philippines

AI Specialist (AI Team Lead) *Jan 2026 – Present*

- Engineered the data platform behind **CoreIndex**, the company's AI-vendor directory. It aggregates ~34K providers and 100K+ public reviews, and 1,500+ providers are published on kdci.ai. A 250-sample model A/B test raised verified evidence from 86.9% to 99.0% at ~5× lower cost, and Batch-API processing halved extraction cost.
- Raised graded customer-service AI draft accuracy for a US e-commerce client from 36% in the first graded week to 97% in the latest, sustaining 90%+ monthly; the last two weeks averaged 95.5%, above target. Every reply is human-approved, with financial-risk escalation guardrails.
- Launched **Elaine**, the company's inbound voice agent on kdci.co (ElevenLabs, Twilio, Make.com), about four weeks after the request. It handles RAG answers, lead capture, and live-agent transfer, and 100% of quoted prices come from a pricing tool rather than the model.
- Built a 3-tool merchant-operations automation proof of concept for an enterprise client in the UK. It passed 100% of its evaluation suite and made image background processing ~250× faster.
- Co-led the company's AI Foundations pilot as top-rated trainer (4.98/5, NPS +90) and authored its AI data-governance framework. Onboarded the growing AI team and ran five structured project hand-offs.

Supervaise, Inc. Manila, Philippines

Artificial Intelligence Engineer *Jan 2025 – Jan 2026*

- Re-architected a license-plate recognition pipeline (Kafka, multi-threading, AWS S3/DynamoDB), cutting runtime from 108.6 s to 11.2 s (−90%). Stress-tested it at up to 445 plates per minute on NVIDIA Jetson edge deployments.
- Automated MLOps retraining for detection and recognition models (TAO, YOLOv4-tiny, FP16/INT8 export), replacing a 5–8 hour manual workflow with a single command. Pre-annotation with T-Rex2 and SAM halved annotation time.

De La Salle University, Intelligent Systems Laboratory Manila, Philippines

Project Technical Associate II · Teaching & Research Assistant *2020 – Jan 2026*

- Led an AI vehicle-counting and traffic-analytics project and co-supervised research teams totaling 8 members. Supported instruction for 500+ engineering students in C, MATLAB, and machine learning.
- Founding team member and technical lead of NVIDIA AI Philippines (2,000+ community members). Supported government and enterprise AI-enablement workshops for 40–90+ participants each.

RESEARCH

- **Umali, A.E.B.**, et al. "GATE: Graph-Admissible Transition Evaluation for Self-Auditing Turning-Movement Counting from Monocular Traffic Cameras." *IEEE FMLDS 2026*, Kobe, Japan. Accepted; to appear.
- Jose, J.A.C., ..., **Umali, A.E.B.**, et al. "Smart Shelf System for Customer Behavior Tracking in Supermarkets." *Sensors* 24(2):367, 2024. doi:10.3390/s24020367

EDUCATION

- **M.Sc. Data Science**, De La Salle University (in progress)
- **B.Sc. Electronics and Communications Engineering** (minor in Applications Development), De La Salle University, 2023. Gold Thesis Nominee; Jose Rizal Honors; IECEP National Quiz Champion 2022.

SKILLS

- **AI & LLM:** agentic workflows, RAG, evaluation design, guardrails, model routing and cost optimization, OpenAI / Gemini APIs, Claude Code, ElevenLabs voice AI
- **ML & Computer Vision:** PyTorch, OpenCV, YOLO, NVIDIA DeepStream/TAO, Jetson, CVAT, FiftyOne
- **Data & Engineering:** Python, Playwright, Flask/FastAPI, PostgreSQL, Kafka, AWS, Docker, GitHub Actions CI, pytest, Power BI