

KEVIN ARTHUR DE LIMA

Robotics & Embedded Systems Engineer | UAV Specialist | Full Stack Developer

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Robotics & Embedded Systems Engineer specializing in autonomous UAV development and heavy-lift propulsion systems. Proven track record in engineering 6.2kg Hybrid-VTOL aircraft, integrating ArduPilot/Navio2 flight stacks with distributed Edge-Cloud architectures. Expert in resolving critical thermal challenges through custom CAD design (Active-Vent systems) and implementing real-time AI (YOLOv9) for mission-critical operations. Combines strong hardware prototyping skills (Carbon Fiber, 3D Printing, PCB) with full-stack software expertise (React Native, Python, FastAPI) to deliver end-to-end robotics solutions.

ENGINEERING EXPERIENCE

Lead Robotics Engineer | Project A.E.R.I.S. (Autonomous Emergency Response System) Sep 2025 – 2025

- UAV Systems Architecture: Engineered a 6.2kg Hybrid-VTOL autonomous aircraft using ArduPilot (Navio2) on Linux. Tuned PID loops for heavy-lift stability and implemented MAVLink telemetry streams.
- Thermal Engineering: Designed and manufactured custom Active-Vent Motor Mounts (ABS) using Blender, solving critical 80°C overheating issues on MN4116 motors during high-load hover.
- Edge AI Development: Developed a custom Ground Control Station (GCS) in Python running YOLOv9 for real-time human detection, achieving <10s dispatch-to-insight latency.
- Full Stack Integration: Built a "Tier 1" mobile trigger app using React Native with AES-256 encryption and WebSocket telemetry for secure, real-time drone deployment.

PROFESSIONAL EXPERIENCE

Technical Support & AV Integration Specialist | Seadale Malaysia Sdn. Bhd. Jan 2025 - April 2025

- Executed on-site integration of complex AV systems for high-profile corporate clients (KWSP, Khazanah Nasional).
- Diagnosed and resolved hardware signal chain issues for projectors, sound systems, and IoT control interfaces.
- Managed site inspections and technical documentation for large-scale system deployments.

Full Stack Software Engineer | Binary Technologies, Sri Lanka Sep 2021 - Nov 2022

- Contributed to multiple full-stack development projects.
- Cloud-Based Storage Platform: Assisted in building a scalable cloud storage system using GraphQL and Neo4j, supporting both backend logic and frontend application integration. Real-Time Chat Application: Collaborated on the frontend team, implementing web socket communication and designing UI components with HTML and CSS. Frontend Specialization: Transitioned into a dedicated frontend role, gaining strong proficiency in Tailwind CSS to deliver responsive, user-friendly interfaces.

TECHNICAL SKILLS

- Robotics & UAV: ArduPilot, MAVLink, Mission Planner, QGroundControl, Navio2, Raspberry Pi, ESP32, PID Tuning.
- Hardware: 3D Modeling (Blender), 3D Printing (PETG/ABS), Soldering, Carbon Fiber Assembly, LiPo Power Management (6S).
- Software: Python (OpenCV, YOLO, FastAPI), C++, React Native, JavaScript/TypeScript, Linux (Bash), Git.
- Cloud & Database: GraphQL, Neo4j, REST APIs, WebSockets.

EDUCATION

BSc (Hons) Information Technology | Sunway University Jan 2023 - Jan 2026

MUFY, Computer Science | Monash College Jan 2022 - Oct 2022

Advanced Diploma in Computer Science, Web Development | ANC Maya Avenue Jan 2019 - Sep 2021