

LUAT “LAWRENCE” DINH

Software & Systems Engineer

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PROFESSIONAL SUMMARY

Software and systems engineer with professional experience in automation, application development, Linux-based platforms, system integration, and real-world technical validation. At NVIDIA via Trillium, promoted to AV Test Expert while working across software builds, vehicle networks, sensors, logging, and field failures. Builds web and embedded tools that turn operational problems into practical systems. B.S. in Computer Science.

TECHNICAL SKILLS

Engineering & Integration: Hardware/software integration; system-level validation; functional, integration, regression, and scenario testing; fault reproduction; issue triage; fault-domain isolation; technical documentation

Platforms & Diagnostics: Linux/QNX, SSH/VNC, ADTF, CANalyzer, OBD-II, ECU flashing, CAN bus, Ethernet/TCP/IP, sensors, data logging, Jira

Software & Automation: Python, Bash, JavaScript/TypeScript, React/Vite, Node.js/Express, SQLite, Git, ServiceNow, Selenium, APIs, CI/CD; test scripting, workflow automation, log analysis

Embedded & Sensor Systems: ESP32, LoRa, UWB, radar/proximity sensing, RGB feedback, cameras, LiDAR, ultrasonic sensors, GPS, and fused 12V automotive circuits; sensor integration and telemetry validation

PROFESSIONAL EXPERIENCE

Autonomous Vehicle Test Expert (AVX)

NVIDIA via Trillium — Santa Clara, CA | **May 2025 – Apr 2026**

- Promoted to AV Test Expert, one of three selected from a ~30-person team, and validated NVIDIA's end-to-end self-driving stack across public roads, closed courses, and prototype environments using DRIVE Hyperion 8/8.1 platforms, documenting clear results for engineering review.
- Deployed and configured software builds; verified vehicle, sensor, calibration, and logging readiness; diagnosed failures by tracing system state, configuration, telemetry, logs, and CAN data with Linux/QNX, SSH/VNC, ADTF, CANalyzer, and OBD-II.
- Reproduced regressions and defects, separated setup and operational issues from likely software, hardware, or integration faults, documented conditions and evidence, and escalated clear findings while determining whether testing could safely continue with valid data.

Assistant Systems Engineer

Tata Consultancy Services — Remote / San Jose, CA | **Dec 2021 – Dec 2023**

- Built ServiceNow workflows and JavaScript business/UI rules to automate roles, permissions, forms, and data handling; tested integrations and edge cases before production deployment.
- Ran Selenium smoke tests for CI/CD release gates, documented defects and blockers, and coordinated validation work across Agile teams.

Game Level Designer

Shapescape ApS — Remote / San Jose, CA | **Feb 2016 – Feb 2019**

- Built and tested cross-platform interactive environments for clients including Microsoft's Minecraft Marketplace, using plugins and scripted automation to improve consistency and reduce manual work.

SELECTED PROJECTS

- **Local Driving Intelligence Dashboard** — Building a React/Vite, Node.js/Express, and SQLite dashboard combining NWS forecasts, Caltrans cameras, radar archives, road incidents, closures, and event data for automated long-distance motorsport trip planning.
- **Drift Course Designer** — Built a React/TypeScript planning tool for course paths, clipping points, zones, boundaries, labels, and export; used by Drift Central before events.
- **Radar + LoRa Traffic Detection Network** — Prototyped an ESP32 radar/LoRa remote spotter and repeater-based telemetry network for extended coverage.
- **UWB Proximity Feedback System** — Prototyped a UWB tandem-proximity system that changes RGB output with live vehicle spacing for immediate distance feedback.

EDUCATION

B.S. in Computer Science — San José State University | 2021

CERTIFICATIONS & SPECIALIZED TRAINING

- **Mercedes-Benz / MBRDNA:** T1/T2 OEM Professional Driver Training — Thunderhill Raceway (*top-of-class T2; advanced vehicle control and hazard response*); BERTHA AV Safety & Direct Fault-Injection Assessment
- **NVIDIA:** Automotive Environment Safety & Awareness; High-Voltage HV1/HV2
- **IBM / Coursera:** Linux Commands & Shell Scripting