

NEIL BERRY

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Portfolio: <https://luzcidmusic.github.io/NeilBerryPortfolio>

ELECTRICAL ENGINEER (ENTRY-LEVEL)

B.S. Electrical Engineering (2012) with LED product engineering experience and 10 years running a technical, hands-on audio engineering/education business. Strengths include test & validation, technical documentation, troubleshooting/root-cause analysis, and customer-facing technical support.

TECHNICAL SKILLS

Hardware: electronics assembly & wiring; basic prototyping; system integration; troubleshooting/root-cause

Test & Documentation: product testing; test procedures; technical documentation for non-engineers; requirements translation

Embedded / Controls: Raspberry Pi; GPIO control; sensor-to-actuator automation logic

Tools / Software: Python; Java; Excel/Google Sheets; soldering/rework

Domains: LED lighting systems; high-power LED builds (150W class); signal-driven lighting control

ENGINEERING PROJECTS

Automated Plant Watering System (Raspberry Pi + Soil Moisture + Solenoids) | Personal Project

- Built a closed-loop system that reads soil moisture and controls solenoid valves to regulate water flow
- Implemented threshold-based control logic to improve consistency vs. manual watering
- Integrated sensing + actuation hardware and validated performance end-to-end in real-world use

Programmable Studio LED System (Music-Reactive LEDs + Video-Driven LED Matrix) | Personal Project

- Designed and installed a programmable LED studio lighting system with music-reactive motion/effects
- Built a custom LED matrix capable of displaying mapped video content from MP4 files
- Focused on reliability, repeatable setup, and clean integration for daily studio use

3x 150W 7-Band Spectrum LED Grow Lights | Personal Project

- Built three high-power, multi-band spectrum LED fixtures used for plant growth applications
 - Managed assembly, mounting, wiring, and functional validation for sustained operation
 - Standardized the build process to improve consistency across units
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EXPERIENCE

Product Engineer (LED Lighting) — Environmental Lights | 2013 (8 months)

- Tested and evaluated new LED products to support product selection and release readiness
- Wrote technical documentation and internal guides used by sales staff to support customers
- Assisted sales with customer project design support by translating needs into viable product solutions

Founder / Instructor — Audio Engineering & Music Production School (LUZCID) | ~10 years

- Delivered 1:1 technical instruction; built structured learning plans, documentation, and repeatable workflows
- Diagnosed and resolved complex technical issues across hardware/software signal chains under deadlines
- Improved reliability through checklists, standardized setups, and clear technical communication

Touring Musical Artist / Technical Operator — LUZCID | ~10 years

- Maintained dependable live performance systems through rigorous prep, standardized setups, and rapid troubleshooting
 - Coordinated with venues and engineers to ensure consistent technical execution in high-pressure environments
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EDUCATION

B.S. Electrical Engineering — SUNY New Paltz | 2012