John Le

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SUMMARY

Versatile and results-driven Engineering Technician with 5+ years of experience spanning electrical engineering, software development, and production process optimization. Proven ability to troubleshoot complex hardware and software issues, develop custom Python and C# applications, and implement efficiency improvements across diverse technical systems. Key achievements include reducing system imaging time by 60%, decreasing label costs by 97%, and maintaining a 90%+ resolution rate on RF communication system troubleshooting. Seeking a challenging engineering role where a broad skillset and commitment to innovation can drive significant contributions.

EDUCATION

DeVry College of New York *Jan. 2022 – Present*
B.S in Engineering Technologies

Monroe Community College *Aug. 2018 – May 2021*
A.A.S in Electrical Engineering Technologies

EXPERIENCE

UTC Retail, Victor, NY *Sept. 2023 – Present*
Engineering Technician

- Developed meticulous documentation, making complex processes accessible even to untrained individuals. This resulted in remarkable efficiency gains and near-error-free execution.
- Led the creation of in-house software solutions in Python that drove a seamless transition from antiquated systems to state-of-the-art methodologies, optimizing operations.
- Proficiently diagnosed and resolved point of sale system issues, systematically assessing warranty statuses, meticulously analyzing failure trends, and orchestrating swift, data-driven decisions on product repairs or in-house solutions.
- Collaborated seamlessly with cross-functional teams to maintain a proactive, efficient channel of communication with suppliers. This facilitated discussions on recurring failures, data-rich diagnostic insight sharing, and feedback incorporation into product designs to meet evolving client requirements.
- Spearheaded BIOS testing and validation initiatives, delivering insightful feedback to fine-tune point of sale systems for peak performance.
- Expertly harnessed the power of Windows Pre-Installation Environment (WinPE) to capture and customize gold images according to precise customer specifications.
- Innovatively designed and developed automated recovery utilities alongside user-friendly instructions. These resources empowered customers to independently restore systems to their gold image with unparalleled ease, reducing downtime and enhancing customer satisfaction.
- Played a pivotal role in ensuring rigorous validation of engineering designs and drawings, ensuring unwavering adherence to the highest quality standards.

- Spearheaded the creation of meticulously detailed in-house engineering documentation for upcoming product lines. This invaluable resource streamlined transitions to cutting-edge technologies, fostering peak organizational efficiency.
- Validate that the performance of prospective PCBs is consistent with customer requirements through rigorous evaluation and testing.
- Analyzed PCB designs of similar solutions to identify alternative components that meet performance and reliability requirements while reducing cost.
- Engineered and constructed custom cable assemblies to validate the performance and feasibility of innovative solutions to customer requirements.
- Optimized image deployment for a major retail client by developing local staging USB drives that bypassed the need for system preparation (Sysprep), decreasing imaging time by approximately 15%.
- Collaborated with hardware vendors and software providers through meetings and correspondence to debug products, finalize designs, address technical issues, explore new technologies (AI, MDM platforms), and ensure product certifications.
- Evaluated the feasibility of deploying Windows 11 IoT LTSC on various point-of-sale system, including legacy models, providing critical insights for future product roadmaps.
- Isolated and resolved a critical system lock-up issue affecting new shipments of a specific point-of-sale system model during the staging process, ensuring smooth production flow.
- Addressed a software defect in collaboration with the software development team related to an AI platform, contributing to the resolution of critical issues.
- Diagnosed and resolved a complex display issue on a point-of-sale system with a rear display, ensuring full touch functionality and enabling a critical product demonstration for a major client.
- Recreated and captured a base system image for a point-of-sale system model without requiring physical access to the hardware, demonstrating problem-solving skills and resourcefulness.
- Recreated and supported a legacy PXE boot server infrastructure to maintain production support for an older product line, ensuring business continuity.
- Enhanced a new PXE boot server to support UEFI PXE booting, future-proofing the imaging infrastructure and enabling support for modern hardware configurations.
- Investigated and addressed network-related failure trends on a specific point-of-sale system model, contributing to improved system stability and reduced network disruptions.
- Modernized legacy test processes for sign light main boards by creating a user-friendly, script-based testing and programming utility, simplifying operations for production staff.
- Modified WinPE imaging USB drives to incorporate remote management utilities, enabling centralized image capture and application, and improving engineering efficiency by allowing simultaneous task management.

L3Harris Technologies, Rochester, NY *Jan. 2020 – Sept. 2023*
***Manufacturing Technician** B* *May 2021 – Sept. 2023*

- Diligently and meticulously troubleshot thousands of RF communication systems valued at $10M, significantly enhancing product reliability and generating significant cost savings.
- Employed efficient troubleshooting techniques to diagnose and resolve complex issues contributing to a resolution rate of over 90% on various L3Harris systems, ensuring optimal product quality and reducing waste.
- Utilized electrical engineering expertise to reverse engineer and diagnose defects of printed circuit boards.

- Coordinated with interagency departments to correct issues, which aided in preventing design flaws.
- Actively resolved real-time assembly and manufacturing failures, utilizing advanced tools like oscilloscopes and analyzers. These interventions minimized downtime, prevented delays, and eliminated unnecessary disruptions.
- Orchestrated seamless cross-team communications among design engineers, test engineers, quality engineers, operational management, and fellow troubleshoot technicians to ensure collaborative synergy throughout the production cycle.
- Spearheaded and executed 17 E3 projects aimed at optimizing job efficiency, augmenting test yield, mitigating failures, and capturing valuable tribal knowledge to facilitate a streamlined and highly effective training process.
- Played a pivotal role in 7 E3 initiatives, actively contributing to the formulation and implementation of the company's engineering ideals, fostering continuous improvement across the organization.
- Conducted thorough training sessions for multiple newly recruited Manufacturing Technician A, offering detailed instruction on a diverse range of test fixtures. The training focused on building their proficiency in equipment operation and interpretation of test results. By providing comprehensive knowledge and practical skills, the technicians were equipped to perform complex testing procedures with confidence, ensuring accurate and efficient outcomes.
- Developed a specialized training process for a Manufacturing Technician A, focusing on electronic troubleshooting techniques, precise measurements, and efficient triage methods. This program enabled their promotion to Manufacturing Technician B within 12 months.
- Created and maintained detailed technical documentation, capturing essential measurements, functions, and programs for troubleshooting. This centralized knowledge base ensures standardized practices and supports efficient workflows.
- Introduced innovative solutions tailored to specific challenges, such as a triage process to quickly identify false failures. This approach streamlined troubleshooting and reduced diagnostic time.

Manufacturing Technician A *Jan. 2020 – May 2021*

- Electrical technician responsible for testing and entry-level troubleshooting of multiple RF communication systems worth a total of $4.5M ensuring product reliability, resulting in saving approximately $225K.u
- Worked with engineering teams to audit the functionality of five separate telecommunication systems. Elicited input and performed Root Cause Analysis (RCA) to identify and correct issues in the manufacturing process.

MCC Engineering Tech Learning Center, Rochester, NY *Oct 2018 – Jun 2020*
Student Aide

- Provided expert assistance and tutelage to fellow students, imparting in-depth knowledge in subjects such as Introduction to Digital Electronics, AC/DC Circuit Analysis, and Linear Circuits, resulting in notable academic achievements.
- Facilitated an optimal learning environment by maintaining the cleanliness, organization, and functionality of the facility, ensuring a conducive space for student collaboration and experimentation.

SKILLS

Electrical Engineering:

- RF Fundamentals & Troubleshooting
- Circuit Design (Analog & Digital)
- PCB Troubleshooting & Repair
- Electrical Diagnostic Tools (Oscilloscopes, Multimeters, Spectrum Analyzers, Network Analyzers, Logic Analyzers)
- Soldering & Desoldering
- Cable Assembly & Engineering

Programming & Scripting:

- High-level Languages: Python, C#
- Scripting Languages (PowerShell, Batch Scripting, Shell Scripting)
- SQL (Database Design & Integration)
- OCR (Optical Character Recognition)

Operating Systems & Environments:

- Windows Operating Systems (Windows 10, Windows 11, Windows XP - legacy, WinPE, Windows Native Boot)
- Linux (Command Line, Scripting)
- Unix

Networking & Telecommunications:

- RF Fundamentals & Troubleshooting
- Networking Protocols (TCP/IP, Ethernet, VLANs)
- Ethernet Systems (Cabling, Troubleshooting)
- PXE Booting (Configuration, Support, Modernization incl. UEFI)
- WebSockets (Client/Server Communication)
- Network Configuration & Troubleshooting

System Imaging & Deployment:

- System Imaging
- Image Deployment Optimization Techniques (Local Staging, Scripting)
- Image Management Strategies (USB-based, Native Boot)
- BIOS/SMBIOS Configuration & Serialization

Software & Applications:

- Visio (Diagramming, Workflow Creation)
- Multisim (Circuit Simulation)
- LabVIEW (Data Acquisition, Test Automation)
- Microsoft Office Suite (Word, Excel, PowerPoint, Outlook)
- Remote Management Utilities (Implementation & Utilization)
- RF Simulation Software

Problem-Solving & Analytical:

- Troubleshooting Expertise: System-Level (Software, Hardware, Network), PCB Troubleshooting, RF System Troubleshooting, Point of Sale (POS) System Diagnosis
- Root Cause Analysis (RCA)
- Reverse Engineering (Legacy Systems)
- System Optimization & Performance Tuning
- Analytical Thinking & Data Analysis (Failure Trend Analysis, Warranty Assessment)
- Adaptability & Resourcefulness

- Proactive Problem Prevention

Documentation & Communication:

- Technical Documentation Creation: Engineering Drawings, Work Instructions, Technical Manuals, User Guides, Client Documentation
- Process Documentation: Workflow Documentation, Training Materials
- Clear & Concise Communication
- Knowledge Transfer & Training

Project Management & Initiative:

- Project Leadership, planning and execution
- Process Improvement & Automation
- Initiative & Proactiveness
- Time Management & Efficiency Optimization
- Engineering Validation & Quality Assurance

Client & Vendor Relationships:

- Vendor Collaboration & Management
- Client Support & Relationship Management
- Needs Analysis & Requirements Gathering
- Technical Presentations

PROJECTS

UTC Retail Production Infrastructure Upgrade *Dec. 2023 – Aug. 2024*

Role: Project Lead
Key contributions included:

- Software Development: Led the development of a suite of Python-based applications to manage label printing, serial tracking (utilizing SQL database), modernized test station operations for Pole Displays and Sign Lights, and automated software updates. These applications featured user-friendly Tkinter GUIs, web-socket client/server architecture, and robust process handling.
- WinPE Image Optimization: Redesigned WinPE imaging processes and utilities, achieving a 60% reduction in image deployment time significantly decreasing labor hours.
- Labeling System Modernization: Implemented a modern labeling system and transitioned to a cost-effective two-label solution (smaller tamper-proof label + separate shipping/EULA label), resulting in a ~97% cost reduction per label (from ~$0.30 to ~$0.00868).
- Hardware Upgrade Planning: Oversaw the transition from outdated Windows XP systems and Zebra TLP2844 printers to modern Windows 10 systems and Zebra ZD220 printers, improving hardware reliability and performance.

Outcomes: Enhanced production efficiency, improved system and network security by eliminating Windows XP systems, reduced image deployment time by ~60%, and decreased label costs by ~97%. The modernized UTCS infrastructure provides a robust, scalable, and cost-effective solution for UTC Retail's production needs.

EXTRACURICULARS

Institute of Electrical and Electronics Engineers	*Member since Dec. 2021*
National Society of Professional Engineers	*Member since May 2021*
Engineering Leadership Council, Monroe Community College	*Sep. 2019 – May 2021*