Luis Eduardo Lomelí Saavedra

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Education

Centro de Enseñanza Técnica Industrial (CETI) — Guadalajara, JAL
B.S. in Mechatronics Engineering, Robotics and Automation Specialization — Oct 2023 – Dec 2026
Relevant Coursework: Digital Electronics, Analog Circuit Design, Control Systems, Embedded Systems
Senior Project: SCARA Robot design with integrated PCB including microcontroller, motor drivers, and power regulation stages

Centro de Bachillerato Tecnológico Industrial y de Servicios #49 — Ocotlán, JAL
Electrical Technician Degree Dual Education Program with Nestlé — Jul 2019 – Jul 2022
Graduated with High Honors. Specialized in industrial automation and PLC programming

Experience

Independent PCB Designer — Guadalajara, JAL
Freelance Electronics Engineer — Jan 2020 – Present
- Designed and delivered 15+ PCB projects specializing in mixed-signal and power electronics applications
- Managed complete PCB development lifecycle from schematic capture to testing and assembly
- Implemented HDI and SMD technologies in multilayer PCBs (up to 4 layers) with focus on signal integrity
- Integrated communication protocols including UART, I2C, and Serial interfaces in embedded designs
- Utilized Altium Designer for PCB layout and currently expanding expertise in OrCAD for enterprise applications
- Conducted circuit simulation using SPICE and LTSpice for design validation and optimization

Soluciones y Equipamiento en Informática — Ocotlán, JAL
Electronics Technician — Jan 2020 – Present
- Maintained and repaired specialized industrial equipment including CNC machines, servers, and communication systems
- Diagnosed and resolved hardware failures in complex electronic systems and network infrastructure
- Performed component-level troubleshooting using oscilloscopes, spectrum analyzers, and function generators

Nestlé Factory Ocotlán — Ocotlán, JAL
Automation Engineering Intern - Dual Education Program — Jul 2020 – Jul 2022
- Programmed and implemented new functionalities in industrial PLCs for automated production lines
- Integrated specialized sensors and variable frequency drives in milk powder production systems
- Led critical system recovery project by reprogramming PLC that controlled entire can manufacturing process
- Collaborated with cross-functional teams to optimize production efficiency and reduce downtime
- Gained hands-on experience with HMI systems and industrial communication protocols

Technical Skills

PCB Design Software: Altium Designer (Intermediate), OrCAD (Learning), AutoCAD, SolidWorks (Certified)
Programming: C/C++, Python, LaTeX, Ladder Logic • **Simulation:** SPICE, LTSpice, Multisim
Test Equipment: Oscilloscopes, Spectrum Analyzers, Function Generators, Multimeters
Specializations: Mixed-Signal Design, Power Electronics, RF Design, Signal Integrity
Protocols: UART, I2C, SPI, Serial, Fieldbus • **Manufacturing:** SMD, HDI, Multilayer PCB
Languages: Spanish Fluent, English Conversational • **Certifications:** SolidWorks (2023), Cadence Training (2024)