

Jesus Francisco Lopez Leal

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Professional Summary

Software Development Engineer with experience building automation tools for MES and manufacturing environments. Develops full-stack systems that reduce manual processes and improve visibility across production operations. Experience handling production data, Jidoka, and real-time monitoring in MES environments.

Experience

Continental Automotive, MES Fullstack Developer

Development and maintenance of internal MES tools used across the production floor.

- Developed internal applications using C#, .NET, WPF, React, Node.js, SQL Server, and Oracle databases.
- Rebuilt the Jidoka reporting system, improving event accuracy by 62% and correcting inconsistencies affecting internal and customer audits.
- Designed and implemented a REST API for real-time production alerts and monitoring.
- Automated manual operational tasks and built tools to execute complex unit movements within MES environments.

Nogales, Sonora, Mexico

Mar 2023 – Sept 2025

2 years 7 months

Continental Automotive, Web Developer Intern

Developed a web application for the returns laboratory.

- Built an application using React, Next.js, and SQL Server.
- Automated report generation, reducing preparation time from hours to minutes.
- Replaced manual Excel logs with a centralized web system for tracking product returns.

Nogales, Sonora, Mexico

Aug 2022 – Dec 2022

5 months

Projects

MSS Flow

Visual platform for analyzing and executing complex MES unit movements.

- Centralized multiple MES tools, scripts, and queries into a single workflow system.
- Implemented visual flow design to configure and validate unit movements.
- Automated data collection from multiple production systems.
- Added safeguards and validation rules to prevent risky or incorrect MES operations.

Stencil Tracking System

System for tracking stencil checkout, return, and cleaning cycles in PCB production.

- Developed a full-stack application to manage stencil checkout and return processes.
- Implemented time-based monitoring to enforce cleaning intervals.
- Added real-time alerts and supervisor notifications for overdue stencils.
- Improved accountability and reduced manufacturing scrap caused by stencil misuse.

Jidoka Report

Reporting dashboard for analyzing production stoppages triggered by Jidoka events.

- Rebuilt the reporting logic to correctly handle duplicated and overlapping events.
- Improved reporting accuracy by 62% for production and audit analysis.
- Added dashboards with charts and filters for historical production analysis.

ContiBeat API

Custom API created to restore automated notifications after Telegram integrations were blocked.

- Reverse engineered the internal messaging flow of the ContiBeat application.
- Implemented a REST API compatible with existing notification systems.
- Restored automated production alerts without requiring major changes to existing tools.
- Enabled real-time operational monitoring for engineers and supervisors.

Education

Universidad Tecnológica de Nogales, Software Development Engineering

Nogales, Sonora, Mexico
Aug 2019 – Apr 2023

Certifications

Frontend Developer (React) Certificate

Practical evaluation of React development skills.

Software Engineer Certificate

Assessment of data structures and problem-solving skills.

C# Certificate

Evaluation of C# programming and object-oriented programming skills.

Assembly Language Course

Fundamentals of low-level programming and computer architecture.

Skills

Programming Languages: C#, JavaScript, C++, SQL

Technologies & Frameworks: .NET, ASP.NET, WPF, React, Next.js, Node.js

Databases: SQL Server, Oracle, MongoDB

Industrial Expertise: MES Systems, Process Automation, Production Monitoring, Real-Time Systems

Tools: Git, Linux, Windows Server, REST API Development

Languages: Spanish (Native), English (Intermediate-Advanced)