

Irving Montes

Software Developer / PLC Programmer

Software development and integration expert with experience in the full project life cycle, from design to implementation and integration. Proficient in implementing data manipulations and monitoring processes, ensuring efficient and reliable software solutions. Dedicated to continuous improvement and staying up to date with the latest industry trends and best practices to deliver high-quality results.



Work History

2025-01 - Today **System Engineer, Industrial IT**

RHI Magnesita, Switzerland

Experienced IoT Application Developer skilled in the end-to-end software development lifecycle. I specialize in engineering modular, component-based applications for edge devices, ensuring scalability and rapid deployment. Proficient in using Git for version control and leveraging Microsoft Azure for orchestrating CI/CD pipelines and managing device deployments. A key part of my role involves creating and maintaining virtualized test environments to rigorously validate software performance and reliability before it reaches the field.

2024-05 - 2024-12 **Software Engineer Pre-Development**

Bystronic Laser AG, Switzerland

I am engaged in the development of innovative proof of concept projects that enhance and expand the capabilities of our industrial machines. My primary focus is on solutions that integrate technology into our operational framework.

- Developing an object detection system that utilizes a camera setup and machine learning algorithms. This project is geared towards accurately detecting objects across various operational environments.

2023-05 - 2024-04 **Engineer for Marine Application**

Siemens Energy, Germany

- Utilized PCS7 and PLC to design and optimize ship control system applications, focusing on power management and propulsion systems.

2018-08 - 2023-04 **Software Developer / PLC Programmer Consultant**

Capgemini, Germany

- Collaborated on the Robert Bosch Packaging Technology GmbH GlaxoSmithKline Project as a PLC software developer.



Contact

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Skills

- Core IoT & Industrial
- Azure IoT Edge
- Docker - Docker Compose
- IEC 61131-3 Standard
- PLC Programming
- Object-Oriented in C++
- Python
- Allen-Bradley Rslogix
- Siemens Tia Portal
- Wonderware

- Developed modular Function Blocks (FBs) using SCL for robotic and camera system, streamlining integration and promoting reusable code, resulting in more efficient software development and maintenance.
- Designed and developed PLC logic using SCL code, adhering to GMP and GAMP standards, based on the functional and control system requirements outlined in the Functional Specification
- Debugged and troubleshoot PLC <> MES.
- Enhanced existing software by correcting errors, adapting to new hardware, and optimizing performance for improved user experience.

2014-06 - 2018-05 Control System Engineer

W-Industries, USA, Houston, Tx

- Developed and commissioned PLC (Allen Bradley, Siemens) systems for safety and process control, as well as HMI (Wonderware, FactoryTalk View, WinCC) solutions based on operational philosophies.
- Designed and implemented Function Blocks (FBs) in accordance with operational philosophies, creating efficient and reusable SCL code for PLC programming.
- Conducted coding development and design for HMI and PLC systems in the Addax Petroleum Cameroon project, ensuring seamless integration and functionality.
- Installed, configured, and administered production databases running on SQL Server, optimizing performance and reliability.
- Automated data processes for Tag generation used in both interface design and PLC database management.
- Monitored turbine data and gas inlet supply, implementing a PID control system for enhanced performance and stability.
- Commissioned Monitoring and Control Systems for the Ayatsil Multiphase Pump System, ensuring successful implementation and operation.

2013-08 - 2014-06 Field Service Engineer

Siemens, Mexico

- Evaluated equipment performance and demonstrated best practices for operation and servicing, ensuring optimal functionality and efficiency.
- Conducted tests and monitored data to assess the quality of commissioned equipment, verifying performance and compliance with project specifications.
- Developed and commissioned drive technology for medium and low voltage systems in the BEC oil and gas project, specializing in the commissioning of Sinamics Perfect Harmony systems.

- HMI Programming
- C++ for ROS
- SCADA
- Medium and Low Voltage Drives
- Industrial Communication Protocol
- Instrumentation
- Allen-Bradley FactoryTalk view
- MES

Languages

Spanish

English

German

- Successfully executed pre-commissioning and commissioning of VFD Sinamics Perfect Harmony for the Bateria Iridio Gas Separator project, ensuring proper setup and operation.
- Performed maintenance on VFD Masterdrive Cantarel and precommissioned 20 VFD Sinamics Perfect Harmony units for the BEC PEMEX project, guaranteeing smooth integration and functionality.
- Managed pre-commissioning of VFD Sinamics Perfect Harmony systems for the Rig Ayatsil-B BEC project, ensuring proper installation and performance.

2013-03 - **Top Drive Technician**

2013-08

Tesco Corporation, Mexico

- Fail detection system through implementation of data acquisition and monitoring.
- Analysis of electrical and pneumatic diagrams for troubleshooting - PLC Troubleshooting.
- Documented meeting minutes and distributed to staff to facilitate follow-up and permanent record.

2012-05 - **Service Engineer**

2013-03

Honeywell, Mexico

- Created relationships with key decision-makers and served as external technical spokesperson.
- Monitored, measured, and reported on data quality
- Report improvement on Data acquisition
- Installed, configured, and tested TPS Honeywell system on specialized platforms.
- Wireless instrumentation pre-commissioning - Signals integration and HMI graphics updated to Pemex Offshore facilities.

2010-08 - **Engineer**

2011-06

W-Industries, Mexico

- Collaborated with on-site directors, operations managers and supervisors on engineering projects.
- BEC Control rooms project - Interpretation of control charts - Verify the Operations Philosophy.
- Upgraded wellhead control panels drawings based on customer specifications.

Education

2006-08 -
2011-12

Bachelor of Engineering: Electronic Engineer, Automation and Control

- Microcontrollers, Fuzzy Control, PID Control, CiscoCCNA.
- Tank Level Control Project, using PID, Instrumentation and PLC.



Interests

Blockchain Technology.

AI.

Photography.