



# MARCO ANTONIO MUÑIZ ABAD

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## SUMMARY

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Mechatronics Engineer with experience in ICT testing (Keysight, Digital Test, Flying Probe, FVT, and FCT). Specialized in test system integration, support software development (ASP.NET, WPF, SQL Server), and process automation to improve FPY and manufacturing efficiency. Skilled in NPI support, fixture supplier collaboration, failure analysis, and continuous improvement of hardware and software test solutions. Intermediate English proficiency (B1-B2) with availability for international travel.

## WORK EXPERIENCE

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### Test Engineer – BCS Automotive Interface Solutions

March 2024 - Present

- Sustain to high performance the ICT systems (Keysight i3070, Digital Test, Flying Probe) and Functional Test (FCT/FVT) stations for automotive customers.
- Support to production lines by troubleshooting ICT downtime issues impacting production flow.
- Implement engineering changes on ICT and flashing stations (software and hardware) to improve reliability.
- Optimize test cycle times and enhance coverage of ICT programs.
- Perform performance analysis of ICT equipment using quality tools (SPC, MTTR, MTBF).
- Collaborate with cross-functional teams to apply corrective actions for rejected parts and customer complaints.
- Control of test software versions, spare parts management, and root cause analysis of failures on the production floor.
- Designed a database system for MTTR and MTBF monitoring, enabling data-driven maintenance decisions and real-time analysis of test equipment performance.
- Implemented hourly production count system for ICT lines, improving traceability and production monitoring.
- Configured and deployed automatic scanner setup for ICT Digital Test systems, standardizing test processes and reducing setup time.

### Junior Test Engineer-Kostal Mexicana

Jan 2023 - March 2024

- Developed databases in Visual Studio/SQL for real-time monitoring of Backend test equipment failures and cycle times.
- Created ICT documentation systems ensuring compliance with traceability requirements.
- Participated in the design and validation of flexible programming stations for microcontrollers.

### PLC & Drives Programmer- TRAMEC Queretaro

Jan 2022 - Jan 2023

- Programmed PLCs, frequency converters, and Delta Electronics servomotors using ISPSOFT in Ladder language.
- Designed, implemented, and optimized automated systems to ensure efficient and precise operation of industrial equipment.
- Configured advanced parameters of drives and servomotors to improve performance and achieve seamless system integration.
- Contributed to continuous improvement of automation processes to enhance reliability and production efficiency.

## EDUCATION

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### Technological Institute of Querétaro – B.Eng. in Mechatronics

Aug 2018 - Oct 2023

- Focus on digital design and manufacturing, including electrical, electronic, and mechanical systems.
- Coursework and projects in microcontrollers, robotics, PLC programming, control systems, and industrial networking.
- Capstone projects involved automation, industrial testing, and integration of mechatronic systems.

## ADDITIONAL INFORMATION

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### Certifications:

- Keysight i3070 ICT – User Fundamentals I (40 Hours)
- Keysight i3070 ICT – Production Support (40 Hours)
- Siemens TIA Portal – PLC Programming
- Allen-Bradley RSLogix 5000 – PLC Programming

### Software & Tools:

- **PLC & Automation:** TIA Portal (Siemens), Studio 5000 (Allen-Bradley), GX Works (Mitsubishi), ISPSoft (Delta).
- **Design & Simulation:** SolidWorks, AutoCAD, FluidSIM, RobotStudio, Festo Didactic.
- **Programming & Databases:** C#, ASP.NET, WPF, SQL Server, SQLite, Python, EPPlus.
- **Networking & IT:** Cisco Packet Tracer, Microsoft Office Suite.

### Languages:

- Spanish: Native
- English: Intermediate (B1–B2)

### Mobility:

- Passport: Mexican, valid
- US Visa (Tourist): Valid until 2034

### Technical Skills:

- Mechatronics System Integration, Automotive Engineering Technology, Robotics and Automation, Software Development & Databases, Electronics Testing.

### Other Skills:

- Respect, honesty, integrity, willingness, discipline, work under pressure, teamwork, problem solving, spirit of work, good personal relations, good organization skills.