

Alexis Torruco

Mechatronics Engineer | Functional Testing (FT/FTA) | NI TestStand | Vision Systems

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PROFESSIONAL SUMMARY

*Mechatronics Engineer with **over 4 years of experience** in **Functional Testing (FT)** and **Functional Test Automation (FTA)** in **electronics and automotive manufacturing environments**.*

*Experience in **failure analysis, debugging, system validation, and technical support** in both **production and remote environments**.*

*Proficient in tools such as **NI TestStand, Keyence vision systems, and electrical testing**.*

TECHNICAL SKILLS

- Functional Testing (FT)
- Functional Test Automation (FTA)
- NI TestStand
- Keyence Vision Systems
- Electrical diagram interpretation
- Electrical testing (voltage, current, short circuits, among others)
- Debugging and hardware/software failure analysis

PROFESSIONAL EXPERIENCE

Service Engineer – Vectralis Engineering

Sep 2021 – Apr 2025

- Technical support, diagnosis, and troubleshooting of failures in functional testing stations (FT) and automated testing stations (FTA) in electronics and automotive manufacturing environments
- Preventive and corrective maintenance
- Communication with national and international clients
- I/O validation, functional testing, and diagnostics based on customer specifications and electrical diagrams
- Development, adjustment, and maintenance of test sequences in NI TestStand for functional testing stations
- Analysis and improvement of existing tests: correction of tests, implementation of negative tests, and real validations
- Integration and verification of wiring, relays, sensors, and actuators in test stations
- Diagnosis of failures between hardware and software
- Support for existing libraries in C/C++, .NET, and Python (minor adjustments and stability improvements)
- Development of test sequence from scratch for an industrial Keyence vision system in an FTA station
- Technical documentation, manual creation, status reporting, and issue tracking in assigned projects
- Training technical staff on equipment usage and interfaces in production lines

Bilingual Technical Support Agent – Teleperformance

Oct 2020 – Aug 2021

- **Technical support for telecommunications services (internet, phone, and TV)**
- **Troubleshooting and issue resolution using internal tools**
- **Account management, incidents, and billing support**
- **Customer support in English in high-pressure environments**

ICT Testing Intern – Sanmina

Mar 2019 – Dec 2019

- Support for ICT systems in production environments
- Failure diagnosis and differentiation between real failures and false rejects
- Collaboration with electrical diagnostics teams
- Documentation of results and production reports

RELEVANT PROJECTS (FT / FTA)

Internal Project – Vectralis Engineering (FT Software Development & Validation)

- Full development of test sequence in NI TestStand for an FTA station
- I/O signal verification and test logic validation based on customer specifications
- Execution of negative tests and real validations to ensure system reliability
- Issue tracking and resolution
- Internal and customer status reporting
- Hardware implementation
- Test implementation based on customer Test Specifications

Internal Project – Vectralis Engineering (FT Development, Installation & Support)

- Installation of functional testing systems (FT)
- Training of engineers and technicians on system usage
- Validation using Golden Sample PCBs
- On-site and remote production support
- Development and debugging of test sequences in NI TestStand
- Hardware and software diagnostics to eliminate false rejects
- Compliance with test specifications and electrical diagrams
- Documentation, manual creation, and reporting for internal teams and international clients

Internal Project – Vectralis Engineering (FTA Implementation)

- Development of Keyence vision system sequence
- Issue tracking and resolution
- Support in programming Epson robot sequence

EDUCATION

- **Full Stack Web Developer (Backend Specialization) – Henry Bootcamp.** *May 2025 – Jan 2026*
- **Bachelor's Degree in Mechatronics Engineering.** *Sep 2013 – Mar 2018*

ADDITIONAL EDUCATION & CERTIFICATIONS

- [EF SET English Certificate](#) – B2 Upper Intermediate (Jan 2026)
- [Full Stack Developer Certificate](#) – Henry (Jan 2026)
- [SolidWorks Mechanical Design](#) – Associate (CSWA)
- Basic NI TestStand Course – Vectralis Engineering-Baumman
- Vision Systems Certifications (Keyence, Cognex)

LANGUAGES

- Spanish: Native
- English: B2 – Upper Intermediate (EF SET)