



IGOR DAVINCI

Automation & Commissioning Engineer

PLC · Motion Control · Functional safety

Faenza (RA), Italy

[linkedin.com/in/igordavinci](https://www.linkedin.com/in/igordavinci) · github.com/IDavinciCode

Native Italian and Portuguese · Working English · Available for international travel

SKILLS

Control platforms

Siemens TIA Portal V15-21
Siemens STEP 7 / S7-300
Omron Sysmac Studio
Omron CX-One
CODESYS
Rockwell Logix 5000
Beckhoff TwinCAT 3

Languages and standards

IEC 61131-3
LAD · ST · FBD
PLCopen Motion Control
Electronic cams
Multi-axis synchronisation
PackML
Python
SQL
C

Functional safety

Pilz PNOZmulti 2
Siemens F-CPU
PROFIsafe
ISO 13849

HMI and supervision

WinCC Unified
WinCC Comfort
CX-Designer
FactoryTalk

Networks and remote support

PROFINET
Modbus
Ethernet/IP
Secomea · VPN

Electrical design

EPLAN
SPAC Automazione
Electrical drawing reading
Mechanical drawing reading

Method

Lean Six Sigma Bronze
Git · versioning

PROFILE

Automation engineer with 4 years of experience across the full cycle of automatic machines for packaging and ceramics and of process plant in the hospital sector: from PLC software development to the acceptance test at the end customer. Around 24 PLC projects on Siemens and Omron platforms, with commissioning in 7 countries across Europe and North America and acceptance tests run on my own, including the customer interface and the handling of non-conformities. Specialised in Siemens S7-1500 / TIA Portal, PLCopen motion control and functional safety. I build my own software tools to automate verification and testing.

PROFESSIONAL EXPERIENCE

Automation & Commissioning Engineer

[Senzani Brevetti S.p.A., Faenza \(RA\)](#) · March 2024 – present

OEM of automatic machines for food packaging. Export above 85%.

- Customer acceptance tests (CAT/SAT) run on my own at sites abroad, with no project manager, covering software, electrical installation, the customer interface and the handling of non-conformities. 100% of the tests passed first time, zero return trips.
- Signing of the validation reports on behalf of the company.
- Commissioning and service in France, Belgium, Czech Republic, United States, Serbia, Romania and China; remote support via Secomea and customer VPN.
- Technical training delivered to customer personnel (2–5 days, in Italian and in English) on software maintenance, electrical engineering and machine operation.
- Redesign of the software architecture of a cartoning machine starting from a legacy base, defining logic, data structure and naming standards on my own.
- Development and refactoring of PLC applications on Siemens S7-1500 in LAD and ST, with modular state-machine architectures for adjustment, handling and format-change stations.
- PLCopen motion control: gearing, superimposed moves, axis managers and phasing; testing of machines with up to 20 controlled axes.
- Functional safety: diagnostics and setup of Pilz PNOZmulti 2 systems and Siemens F-CPU: speed monitoring, SLS functions, PROFIsafe chains and validation parameters.
- Diagnosis of intermittent faults and handling of production stoppages, on site and remotely; development of diagnostic instrumentation for anomalies on vision sensors, quantifying their share of the scrap and locating the cause at firmware level.
- Technical analysis and HMI migration from TP900 Comfort to WinCC Unified, with an assessment of the architectural constraints.

LANGUAGES

Italian, native

Portuguese, native

English, working

Technical training, acceptance tests and customer negotiation

Spanish, basic

EDUCATION

Higher Technician in Automation and Packaging

ITS Maker, Bologna
2020 – 2022 · 93/100

Architectures and configuration of control systems, industrial control software, mechanical, electrical and pneumatic design, Fanuc robots.

Technical Diploma, Maintenance and Technical Support

I.I.S. "Luigi Bucci",
Faenza
2009 – 2015

CERTIFICATIONS

Certified Lean Bronze

L6S Group, 2021

Technical manager for vehicle roadworthiness testing

Regione Emilia-Romagna, 2017

CONTINUOUS LEARNING

Motion Control with PLCopen, 2024

Siemens TIA Portal, 2024

Structured design of PLC software, 2022

CODESYS, 2022

C language, 2023

AVAILABILITY

Trasferite internazionali

Automation Software Engineer

IPREL Progetti (Gruppo SACMI), Imola (BO) · September 2022 – February 2024

Industrial automation software house of the SACMI Group.

- Led the development of 9 complete PLC projects for SACMI Ceramics, plus smaller orders, on Omron Sysmac Studio and CX-One, the main training platform before moving to Siemens TIA Portal.
- Development of simulation modules for software validation before testing, removing the need for the programmer to be on site during installations; the result held even after I left the company.
- Design of standardised, reusable software modules, cutting development time on later orders.
- Training and mentoring of 2 new colleagues, passing on method and skills.
- Technical support to customers and writing of user manuals for the operation and maintenance of the plants.

Automation Software Engineer, Internship

Senzani Brevetti S.p.A., Faenza (RA) · March 2022 – June 2022

- ITS thesis: Development and testing techniques for PLC software: a packaging case (93/100).
- Testing of machines with PackML architecture, robot cells and cam axes; optimisation of Siemens PLC software.

Electrical Design Hardware, Internship

Comecer, Castel Bolognese (RA) · May 2021 – July 2021

- Design of electrical drawings with SPAC Automazione, datasheet study and component selection, technical data management via PDM-AS400.

EARLIER EXPERIENCE

Technical manager for vehicle roadworthiness testing, PneusCar S.p.A., Forlì (2016–2019): 200–250 tests/month, CED booking management and direct contact with customers.

Head of service staff, Acqua Vip Summer, Castello d'Argile (2012–2017): coordination of 15 staff in a water park with peaks of 2,200 visitors/day.

PERSONAL PROJECTS

Ð-Unit Suite · software for industrial automation

Built on my own, outside working hours

- Modular desktop suite for the analysis of TIA Portal projects and EPLAN electrical drawings. Microkernel architecture with manifest contracts: the core does not know the modules by name, and adding a module requires no change to the core.
- Architectural constraints enforced by automated tests, 265 tests across the suite, semantic versioning and cache invalidation on a pipeline change.
- Structured extraction module: accuracy taken from 72% to 100% top-1 on a frozen benchmark set, with verified ground truth.
- Measured operational impact: a verification task that took about two person-days now takes under an hour: over 90% reduction.
- Integration with external systems: SQL Server, SQLite, OPC UA for data acquisition from PLCs, network tooling in PowerShell (PROFINET, S7, ARP scan).
- Stack: Python, JavaScript, Tauri desktop shell (Rust), Git with semantic versioning and a discipline of atomic commits.

Autorizzo il trattamento dei dati personali contenuti nel presente curriculum ai sensi dell'art. 13 del D. Lgs. 196/2003 e dell'art. 13 del Regolamento UE 2016/679.