Felipe Diogo

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Summary

Mechatronic,Automation and Control Engineer with 8+ years of hands-on experience, delivering several industrial automation projects involving PLC and SCADA programming as well as electrical and automation design. Independent and a fast learner, with a strong ability to acquire new skills and technologies on my own. Always worked on end-to-end solutions, from initial premises arrangement with customers to producing electrical, mechanical, and automation projects, along with key studies and documentation, wiring industrial panels, programming PLCs, programming IoT and SCADA solutions, and leading engineering teams. Deep expertise across the full Industry 4.0 stack: field-level devices, industrial protocols, IT/OT convergence, edge computing, and cloud data pipelines. Equally comfortable in a control cabinet or a code editor. Recently worked with mobile robotics, responsible for product development from scratch to final delivery, including the development and delivery of several autonomous proprietary electric vehicles (UGV/AGV), where I built a deep passion for drones and AGV/UGV robotics, which led me to found my startup, Movewer Technologies. Currently seeking to bring this hands-on engineering and entrepreneurial experience into a focused engineering role.

Relevant Coursework

Hands-on, project-based coursework ,built and wired real systems in the lab, not just theoretical study.

- PLC and SCADA Programming
- Industrial Networks & Fieldbuses
- 3D Modeling and CAD Software
- Web Development
- IT/OT Convergence
- Product Development
- Python and Node.js Development
- Electrical Panel Design & Wiring
- IoT, MQTT and Industry 4.0

Technical Skills

Automation & Industry 4.0: PLC programming (TIA Portal, CODESYS, GX Works), SCADA/HMI (AVEVA, WinCC), industrial protocols (Modbus RTU/TCP, Profinet, EtherCAT, OPC-UA, LoRa), electrical panel design & wiring, IT/OT convergence, IIoT architecture, edge computing, control systems, power electronics, embedded systems, motion control,system integration, technical troubleshooting, remote control.

Software & Data: Python, JavaScript/TypeScript, VBA, C#, Solidity, Node.js, Node-RED, MQTT, InfluxDB, SQL, noSQL, Grafana, N8N, PowerBI, Git/GitHub, Linux, Web development, AI integrations, cloud deployment, Claude Code, LLMs

Engineering Tools: SolidWorks, EPLAN, AutoCAD Electrical, MATLAB, Eagle, Raspberry Pi, NVIDIA Jetson Nano/Orin, Labview

Management: Scrum, Kanban, Jira, version control, cross-functional team leadership, budget and schedule management

Experience

Movewer Technologies **Jun. 2025 – Present**
Founder & Automation Engineer *Portugal*

- Engineered special industrial machines,developing electrical schematics, integrating mechatronic systems, PLC and SCADA programming.
- Architected end-to-end Industry 4.0 solutions for UGV (Unmanned Ground Vehicle) platforms, covering control systems, power electronics, wireless communication, remote-control stations, and multi-sensor integration.
- Built a full-stack Industrial IoT Monitoring Platform using MQTT, Python, Node-RED, InfluxDB, and Grafana; integrated AI-driven analytics to surface actionable insights beyond raw sensor data.
- Defined IT/OT convergence architecture, bridging field-level devices to cloud dashboards with real-time data pipelines and automated alerting.
- Collaborated with a mechanical specialist to co-design several modular UGV systems aligned with client requirements and safety standards, including a high payload UGV (1200kg)

Psyche AeroSpace **Jun. 2024 – Jun. 2025**
Automation Executive Manager *São Paulo, Brazil*

- Built the Automation and UGV divisions from zero; systems delivered contributed directly to a new fundraising round, with technical demonstrations cited as key proof points by company leadership.
- Led a cross-functional team of 5 engineers across two product lines (agricultural UGVs and drone-support infrastructure), reducing time-to-prototype by ˜30% through structured Scrum sprints.
- Owned the full development lifecycle of UGV systems—control, power, and communication—coordinating with mechanical and electronics teams across tight delivery timelines.
- Delivered a 10 kg-payload agricultural quadcopter from concept to flight-ready prototype in under 6 months, including electrical project, mechanical integration, and flight-control and telemetry systems.

Controvale **Jun. 2018 – Jun. 2024**
Automation Engineer *São Paulo, Brazil*

- Engineered 20+ special industrial machines integrating mechatronic systems, IoT connectivity, SCADA supervision, and industrial communication protocols (Modbus, Profinet, EtherCAT); average project delivered on time and within a 5% budget variance.
- Designed and executed full industrial electrical panel projects end-to-end , load calculations, schematics (EPLAN/AutoCAD), component specification, physical assembly, commissioning, and field testing; reduced rework rate by ˜25% through standardized documentation practices.
- Programmed PLCs and configured HMI/SCADA systems (TIA Portal, CODESYS, Indusoft) for manufacturing and process automation projects, improving operator visibility and reducing unplanned downtime across client facilities.
- Served as regional distributor for Wecon and Kinco; built and maintained a portfolio of 35+ industrial client partnerships over 6 years.

Projects

AI DATA PLATFORM | *Industry 4.0, MQTT, IoT, InfluxDB, Node-RED, Grafana, AI Analytics, VPS* **Jan. 2026**

- Production-grade IIoT Monitoring Platform with AI-powered insights deployed on a VPS. Edge layer: Node-RED on Raspberry Pi → MQTT broker → InfluxDB time-series storage → Grafana dashboards with anomaly detection and trend forecasting. ***Click to check it***

HIGH-PAYLOAD UGV – ARMAX | *Autonomous Ground Vehicle, Power & Control Systems* **Aug. 2025**

- Full development of a 1,200 kg-payload UGV. Build-ready deliverable includes system architecture, power-electronics design, wireless control stack, performance benchmarks, and commercial feasibility studies and analysis.
  Click to check the Vehicle

DRONE ASSISTANCE BASE | *Automated Process Plant, Energy Management, Intelligent Control Hub* **Dec. 2024**

- Automated ground-support complex for high-payload agricultural drones: autonomous refueling, energy management, and a centralized intelligent control hub with fully automated field-intelligence-driven workflows.
  Click to check the Project

Thrust Testing Device (TTD) | *Special Machine, Electrical Panel, Production Grade* **Aug. 2024**

- Created and developed a production-grade device for testing and evaluating UAV propulsion motors, capable of measuring thrust, torque, power consumption, and other performance metrics under controlled conditions.
  Click to check it

SIEMENS Portable Case | *Product Design, TIA Portal, WinCC, End to End Solution* **Jul. 2024**

- Developed a portable controller with integrated SIEMENS automation equipment, enabling efficient on-site control and monitoring of industrial processes. ***Click to check it***

Education

Federal Institute of São Paulo **Jan. 2019 – Dec. 2023**
Bachelor of Control and Automation Engineering *São José dos Campos, São Paulo*

Languages

Portuguese — Native **English** — Advanced (C1)

Extracurricular

Dual-Track Professional
Automation Engineer & Software Developer

- Pursuing parallel careers in industrial automation/robotics and software development, applying both disciplines to build integrated Industry 4.0 products.
- Independently developing web applications and automation tools, with a focus on dashboards and AI data-driven solutions.

Startup Founder
Movewer Technologies

- Founded a technology startup focused on unmanned ground vehicles (UGVs), delivering autonomous solutions to industrial, agricultural and logistics clients.