

Gustavo Castro

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## Professional Summary

Senior Embedded Software Engineer with 25 years of experience in industrial automation, programmable controllers, and hardware-software integration. Strong background in C/C++ development, FPGA integration, embedded systems architecture, TCP/IP networking, and fault-tolerant industrial platforms. Proven experience delivering reliable, high-availability systems in complex industrial environments.

## Core Technical Skills

Programming: C, C++ Embedded Systems: Embedded software development, hardware integration, FPGA-based systems Industrial & Networking: TCP/IP, MQTT, Industrial protocols, Smart Grid systems Systems: Fault-tolerant systems, High-availability platforms Tools: Git

## Professional Experience ALTUS SA

R&D Manager – Embedded Systems & Industrial Automation 08/1999 – 07/2010

Led development of industrial automation products and programmable controllers.

Developed embedded software in C/C++ for industrial systems.

Integrated embedded software with FPGA-based hardware systems.

Designed high-performance and high-availability systems for industrial applications.

Developed fault-tolerant systems for oil platforms.

Managed full product lifecycle: specification, development, testing, and production monitoring.

Worked with international partners (India, Czech Republic, Germany) on embedded and automation technologies.

## Elo Sistemas Eletronicos SA

Software Development Manager – Smart Grid Systems 08/2010 – 09/2019

Managed development of remote reading servers and Smart Grid infrastructure systems.

Defined communication protocols and system architecture.

Developed networked solutions using TCP/IP for industrial and residential energy systems.

Led integration between smart grid devices and central systems.

## Ponfac SA

R&D Manager – Computer Vision & Industrial Systems 10/2019 – 07/2023

Developed industrial inspection systems integrating software with hardware devices.

Designed AI-based solutions for industrial automation.

Worked on system architecture and embedded integration for IoT solutions.

## Creare Sistemas SA

Engineering Manager – Safety AI & Telemetry Systems 11/2023 – Present

Lead development of Safety AI Cameras and telemetry systems.

Oversee integration between hardware devices and software platforms.

Ensure reliability and system robustness in industrial and transportation environments.

## Education

MBA – Management of Technology-Based Companies Bachelor's in Computer Science

Languages

Portuguese – Native English – Fluent