

# Gustavo Castro

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## Senior Engineering Manager and CTO/R&D Leader

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## Summary

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I am a highly accomplished and results-driven Senior Engineering Manager and CTO/R&D Leader with a distinguished 25-year track record in building and scaling high-performing, cross-functional teams. My expertise lies in delivering innovative software and hardware solutions from concept to launch, with a deep specialization in SaaS, AI/Computer Vision, and IoT technologies.

Throughout my career, I've demonstrated a proven ability to significantly grow engineering organizations, notably expanding a single product team from 15 to 38 engineers in one year and later overseeing an entire company's software portfolio. I've led complex initiatives globally, including the development of advanced AI algorithms, No-Code computer vision systems, and critical platform restructuring to enhance infrastructure and user experience. My extensive international project experience spans the USA, Germany, and China, providing a broad perspective on global tech challenges.

As a collaborative leader and technical educator, I am passionate about driving both product excellence and team growth. I thrive in environments where technology, strategy, and mentorship intersect, fostering a culture of ownership, accountability, and continuous improvement. My focus is always on aligning technical strategy with strategic business objectives to deliver measurable and significant impact for the team and the business.

## Experience

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Crear Sistemas SA

**Engineering Manager** | Canoas, RS | 11/2023 - Present

### Team Leadership and Management:

- Lead and manage a team of engineers across various disciplines, including backend, frontend, hardware, and data science.
- Foster effective collaboration and communication within the team, ensuring the delivery of high-quality projects within established deadlines.
- Manage the research team in partnership with the Federal University of Rio Grande (FURG), promoting innovation and applied research in advanced technologies.

### Development and Implementation:

- Complete software development lifecycle, ensuring adherence to best practices, coding standards, and agile methodologies.
- Drive the development and implementation of new features and enhancements for the SaaS platform, ensuring customer satisfaction and market competitiveness.
- Lead hardware engineering teams to ensure seamless and efficient integration with the software platform, promoting system interoperability.
- Plan, develop, and deploy new features and components for the SaaS platform, meeting market needs and stakeholder requirements.

### Data Management and Security:

- Manage and analyze telemetry data to enhance the security and reliability features of the SaaS platform.
- Implement security measures and practices to protect sensitive data and ensure compliance with industry regulations and standards.

#### **Project and Innovation Management:**

- Coordinate and manage funded innovation projects, promoting research and development of new technologies and innovative solutions.
- Foster a creative and innovative work environment, encouraging the team to explore new ideas and approaches to solve complex problems.

#### **Product and Solution Integration:**

- Responsible for unifying the company's products and solutions, ensuring cohesion and integration across different systems and platforms.
- Lead platform restructuring initiatives, focusing on improving infrastructure, component modularization, and enhancing the user interface for a more intuitive and efficient experience.

#### **Accomplishments:**

- Managed 15 employees initially and expanded to 38 team members within one year.
- Oversaw all the company's software products, including Safety AI Cameras, telemetry for heavy vehicles (transport and agribusiness), data generation for analysis, and mobile solutions.
- Contributed to the development support team as QA, PO, and Project Manager.

Ponfac SA

**CTO/R&D Manager** | Porto Alegre, RS | *10/2019 - 07/2023*

- Management of the R&D Team, development, customer service, IoT.
- Innovation Project Management, new solutions for computer vision projects.
- Visual Inspection, Computer Vision and Robotics Projects.
- Specification of new technologies and software architecture.
- Ponfac Innovation Project Coordinator with FINEP (Brazilian government development area).

#### **Accomplishments:**

- Advanced from R&D Manager to CTO.
- Developed an area-to-weight conversion algorithm for pig weight estimation using AI.
- Designed and developed a No-Code system for computer vision projects (IDE integrating proprietary SDK, OpenCV, and AI solutions).

Elo Sistemas Eletronicos SA

**Software Development Manager** | Porto Alegre, RS | *08/2010 - 09/2019*

- Software development manager: team management and process improvement.
- Project management, issuing financial and physical reports, contracts, payments, scope definition.
- Outsourced management.
- Specification of new technologies and software architecture.
- Management of systems and applications development projects, remote reading server, alarms, and automatic registration for Smart Grid.
- **Smart Grid Project:** Integration between elements of the smart grid system for infrastructure to access measurement data in consumers (industrial, commercial, and residential). Managed project schedule, reports, scope, and budget.
- **Router Project:** Development of a network infrastructure router for access to meters. Managed product project, schedule, budget, staff, specifications, and pilot batch production.

- Relationship with educational institutions for the development of fostered projects.
- Specification of protocols and software architecture for Smart Grid.
- Definition and development of the smart grid solution architecture for Brazil.

Fundação Bradesco

**Professor Technical Course in Electronics** | Gravataí, RS | 03/2002 - 10/2011

- **Subjects taught:** Introduction to Informatics, Microcontrollers and Interfaces, Organization and Standards, Programmable Controllers, Local Area Networks, Industrial Automation, Industrial Networks.

ALTUS SA

**R&D Manager** | São Leopoldo, RS | 08/1999 - 07/2010

- Management of the R&D sector: budget, staff, hiring, training, negotiation with national and international suppliers.
- Software development manager (Software Factory): team management and process improvement.
- Management of the project team (25 people) to develop industrial automation products and systems.
- Projects included embedded software, networks, high-performance systems, high availability, project management, schedule, budget, acquisitions, suppliers, and production.
- Specification of new technologies and software architecture.
- Projects of fault tolerance systems in oil platforms, automation control.
- Project management of innovation products: programmable controllers (hardware, software, test), programming software.
- Project feasibility analysis and budget.
- Participation in R&D events and national/international fairs.
- Development with partner companies in India and the Czech Republic (technical meetings and training).

## Skills

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- **Software/Languages:** C++, C#, Python, Java, SQL, Next.js
- **Domains:** Embedded Software, Computer Vision, Image Processing, Machine Learning, AI Smart Cam, IoT (Internet of Things), SaaS, Industrial Automation
- **Tools/Technologies:** Power BI, GIT, Jira, Microsoft Excel/PowerPoint, OpenCV, TCP/IP, PLC, Industrial Protocols, MQTT
- **Management:** Software Engineering, Product Development, Project Management

## Education

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**MBA in Management of Technology-Based Companies** University of Vale do Sinos - UNISINOS, São Leopoldo, RS | 10/2006

**Bachelor's in Computer Science** University of Vale do Itajaí - UNIVALI, Itajaí, SC | 07/1995

## Languages

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- **Portuguese:** Native
- **English:** Fluent
- **Spanish:** Basic

## International Experience

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- **2015:** Monitoring of integration tests between management system and data with remote energy meters, USA.
- **2009:** Hannover Fair, Germany.

- **2009:** 20 days in technical specification meeting with project development partner, India.
- **2008:** 10 days for training, Germany.
- **2008:** 10 days visiting raw material suppliers, China.
- **2008 to 2011:** Meetings in Brazil with technicians and executives from India, Czech Republic, and Germany; teleconferences every 15 days.