

# Gustavo Castro

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Orlando, FL | (352) 349-4910 | [gustavocastro73@gmail.com](mailto:gustavocastro73@gmail.com) Senior Engineering Leader / IoT & Computer Vision Specialist

**PROFILE** Engineering leader with a niche specialization in the convergence of physical hardware and software platforms (Cyber-Physical Systems). Expertise in Edge Computing, Telemetry Data Pipelines, and applying AI/Computer Vision to industrial environments.

**CORE COMPETENCIES IoT & Edge:** MQTT, Kafka, Sensor Telemetry, Hardware-Software Integration, Real-time Data. **AI & Vision:** OpenCV Integration, AI Model Deployment (Edge vs. Cloud), Image Processing. **Management:** Distributed Teams, R&D Leadership, Cross-functional delivery.

## EXPERIENCE

**CREARE SYSTEMS | Senior Engineering Manager** (Remote/Hybrid) | Nov 2023 – Present *Leading engineering for Fleet Intelligence and Safety Systems.*

- Directed the engineering of an AI-driven safety ecosystem utilizing on-vehicle cameras to detect operator fatigue and unsafe conditions in real-time.
- Modernized a legacy monolith telemetry platform into a microservices-based SaaS, improving data throughput capabilities for large-scale enterprise fleets.
- Collaborated with hardware engineering teams to ensure optimal firmware-software compatibility for thousands of fielded IoT devices.

**PONFAC S.A. | CTO / Head of R&D** | Oct 2019 – Nov 2023 *Specializing in Industrial Computer Vision Solutions.*

- Architected a "Vision-as-a-Service" platform integrating Python/C++ backends with user-friendly front ends for factory floor deployment.
- Led algorithm development for automated grain analysis in agribusiness, utilizing deep learning models to categorize harvest quality.
- Implemented rigorous testing frameworks for algorithm accuracy validation against real-world noise and environmental conditions.

**ELO SYSTEMS | Software Engineering Manager** | Aug 2010 – Sep 2019

- Delivered Smart Grid metering solutions responsible for tracking massive datasets for energy utilities.
- Engineered fault-tolerant systems designed to run in environments with unstable connectivity, prioritizing local data buffering and integrity.

**(Additional leadership experience at ALTUS S.A - Automation Systems)**

**EDUCATION** MBA - Technology Management | UNISINOS B.S. Computer Science | UNIVALI