Raphael Silveira e Silva

Belo Horizonte, Brazil | Available for Relocation to the U.S. | Visa Sponsorship Required  
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# Professional Summary

# Senior Engineering professional with over 15 years of experience in industrialization, automation, and process optimization for high-volume manufacturing environments. Proven track record in leading complex capital projects, including production line revamping, capacity increase initiatives, and international technology transfers. As a co-founder and Engineering Director, I have a deep understanding of the entire project lifecycle, from strategic planning and Capex management to hands-on implementation and problem-solving on the factory floor. Fluent in English, Portuguese, and Spanish, with a strong ability to drive industrial strategy across multicultural teams in Latin America.

# Core Competencies

* **Industrialization & Process Optimization:** Production Line Revamping, Capacity Increase, Automation Strategy.
* **Capital Project Management:** Capex Optimization, Project Scoping, Scheduling, Budgeting, FAT/SAT.
* **Technology Transfer & Standardization:** Promoting Industrial Blueprints, Best Practice Sharing, Supplier Scouting.
* **Cross-functional Leadership:** Managing Engineering Teams, Coordinating with Operations, Supply Chain, and IT.
* **Technical Expertise:** Mechanical Design (SolidWorks), PLC/HMI Integration, High-Productivity Assembly.
* **Compliance & Quality:** NR-12, UL/CE Regulatory Awareness, Continuous Improvement Initiatives.

# Professional Experience

**SIMA Projetos e Soluções Industriais – Belo Horizonte, Brazil**

*Co-Founder & Engineering Director* | 2016 – Present

Directed the full lifecycle of industrialization projects for major clients in the automotive, consumer goods, and healthcare industries, focusing on improving productivity, quality, and safety.

* Managed complex capital projects, including production line relocations and revamping, from initial Capex approval to final commissioning.
* Drove technology innovation by identifying, testing, and implementing new automation and process technologies to solve manufacturing challenges.
* Acted as the key technical liaison between clients, international suppliers, and internal engineering teams to ensure project success.
* Promoted industrial standards and best practices across projects, resulting in improved efficiency and reduced operational costs for clients.

**Highlighted Industrialization Projects:**

* **Technology Transfer & Standardization (ZF):** Engineered a novel UV LED curing system that solved a critical downtime issue in a highly contaminated environment. The solution was so successful it was adopted as an industrial blueprint and replicated across **three production lines** over three years (2019, 2020, 2021), requiring close collaboration and system integration with a German equipment supplier.
* **Production Line Revamping (Supergasbrás):** Modernized a gas cylinder painting line by replacing traditional curing ovens with a custom automated UV system. This project eliminated a major production bottleneck, **reduced energy consumption by 45%**, and improved final product quality.
* **New Product Industrialization (Novo Nordisk):** Led the development of an AMR-based disinfection robot from concept to a fully deployable, pharma-compliant product, managing the integration of LIDAR, vision systems, and safety sensors.
* **Capacity Increase & Automation (Astergraf):** Solved a critical production bottleneck in a high-speed offset press by designing and building a custom, ultra-compact UV curing module, enabling increased production rates and improved quality.

**AC Implementos Rodoviários – Contagem, Brazil**

*Project Manager* | 2014 – 2016

* Directed the design of mechanical subsystems for trailers and road equipment, including hydraulic, locking, and suspension systems.
* Optimized parts for manufacturability (DFM) and reduced costs through component standardization.
* Coordinated with suppliers and internal teams during prototype testing and full-scale production.

**Fourmec Industrial – Belo Horizonte, Brazil**

*Managing Partner & Co-Founder* | 2008 – 2014

* Led the design and manufacturing of custom machinery for clients in food processing, packaging, and logistics.
* Developed automated platforms compatible with ABB/Fanuc robots and integrated pneumatic and hydraulic components to deliver turnkey solutions.

# Education

**Bachelor of Science in Mechanical Engineering**

Centro Universitário de Belo Horizonte (UNIBH), Brazil – 2021

# Certifications

**Basic Python Programming – Certificate of Completion, 2021**

Acquired foundational skills in Python for engineering applications, including scripting, logic, and basic automation tasks.

**NR-12 Machinery Safety Certification** **– Certificate of Completion, 2021**

Certified in Brazilian industrial safety standard (Comparable to OSHA standards – Emphasizes safe machine design, guarding, ergonomics, and operator training).

# Languages

**Portuguese:** Native

**English:** Fluent

**Spanish:** Working proficiency