

JUAN RICARDO GÓMEZ ANAYA

Mechanical & Industrial Design Engineer | Product & Process Optimization Specialist

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PROFESSIONAL SUMMARY

Industrial Designer with 15+ years of experience in mechanical engineering developing innovative, cost-effective solutions for automotive, food, packaging, and minting industries. Specialized in mechanical design, manufacturing process improvement, cost estimation, and automation. Strong background in CAD/CAM (SolidWorks, Inventor, AutoCAD) and FEA/FEM analysis for tooling, fixtures, and equipment optimization. Proven success in reducing manufacturing costs by up to 50%, increasing throughput by 200%, and shortening validation time by 50%.

EXPERIENCE

MEXICAN MINT (Casa de Moneda de México)

Process & Design Engineer (Specialized Analyst)

Mar 2017 – Oct 2021 | San Luis Potosí, MX

- Led process improvement projects for die manufacturing, automating laser engraving systems that increased production capacity by 200%.
- Designed and implemented a new material handling and tooling system for coining dies, cutting production time by 50%.
- Performed cost estimation, process validation and optimization of new die fabrication process.
- Wrote and reviewed technical documentation, proposals, and process specifications.
- Coordinated operator training, equipment commissioning, and supplier collaboration.
- Enhanced die surface finish parameters, improving lifespan by 40%.

FREELANCE MECHANICAL DESIGN & MANUFACTURING CONSULTANT

Dec 2009 – Present | Remote / Mexico

- Provided mechanical design, Reverse Engineering, CAD modeling, cost estimation, and process optimization services for multiple industrial sectors.
- Designed, simulated, and optimized material handling tools, molds, and fixtures for clients in automotive, packaging, and consumer goods.

Key clients:

Tecnoaglomerados, Tecnoherramental, Integraciones y Aplicaciones en Manufactura, Rexkon, Productos Ultra, Caramelos Duros de México, Cortinas de Seguridad Alba, Cannels, Bolsas de México.

Selected achievements:

- Reduced mold and fixture weight by 25% using FEA/FEM structural optimization.
- Shortened validation time by up to 50% through rapid prototyping with 3D printing.
- Improved process efficiency and throughput using 3D scanning for dimensional validation and automation.

EDUCATION

B.A. in Industrial Design – Universidad Autónoma de San Luis Potosí – Facultad del Hábitat | 2009

Diploma – Technological Development & Innovation Projects – COPOCYT (Potosino Council for Science and Technology) | 2013

Design: Creation of Artifacts in Society (Online) – University of Pennsylvania | 2013

TECHNICAL SKILLS

- Design & Simulation: SolidWorks, Autodesk Inventor, AutoCAD, Rhinoceros, Nastran FEA/FEM
- Additive & Reverse Engineering: 3D Scanning, 3D Printing, GD&T, CMM Fixtures
- Visualization: KeyShot, V-Ray, Photoshop, Illustrator
- Automation & Programming: Laser Engraving Systems, Process Automation
- AI for Design & Conceptualization: Flux, Krea, Midjourney, Prompt Engineering

PROJECT & LEADERSHIP COMPETENCIES

- Project Coordination & Cross-functional Collaboration
- Technical Documentation & Proposal Writing
- Cost Estimation & Throughput Analysis
- Continuous Improvement & Root Cause Problem Solving
- Supplier Management & Training Coordination
- Design for Manufacturing (DFM) & Design Validation

KEY ACHIEVEMENTS

- Reduced manufacturing costs by 50% through design and process optimization.
- Increased production capacity by 200% through automation.
- Reduced product validation times by 50% using rapid prototyping.
- Improved part ergonomics and reduced mold weight by 25%.
- Minimized error-related rejects by 80% via process automation.