CARLOS CANO

New York, New York| Carlos Cano | 518-448-4922 | carlosmcano99@gmail.com

MECHANICAL / PRODUCT ENGINEER

Mechanical Engineer with experience in product development, mechanical design, and manufacturing engineering. Skilled in advanced CAD/CAE tools, GD&T, DFM/DFA, FEA, and Lean methodologies. Proven ability to design, validate, and optimize mechanical systems while coordinating with suppliers, manufacturing teams, and quality engineering. Strong hands-on background in prototyping, testing, and failure analysis.

WORK EXPERIENCE

Product Engineer Jr. **Monterrey, Mexico**
Jr. Product Engineer *Jan 2024 - Sep 2025*

- Designed and released new product configurations using **NX** Siemens and **Teamcenter PLM**, ensuring manufacturability and compliance with engineering standards.
- Created detailed **3D models**, assemblies, drawings, and installation sheets to support production and pilot builds.
- Conducted design validation and provided technical support during pilot implementation, resolving issues through structured root cause analysis(**RCA)**.
- Maintained a **0% design error rate**, preventing assembly delays and ensuring flawless execution.

TOYO KASEI **Guadalajara, Mexico**
Mechanical Design Engineer *Jan 2021 - Jan 2022*

- Generated high-precision 3D models and technical drawings in **SolidWorks**, applying rigorous **Geometric Dimensioning and Tolerancing (GD&T)** principles essential for precision component assembly and metrology.
- Designed and fabricated a custom industrial contact oven, improving raffia tensile strength by **15%** through optimized **thermal performance**.
- Modeled **3D model of the entire factory production lines** in SolidWorks to support layout planning, capacity studies, and future equipment integration
- Co-designed a **semi-automated** packing machine to reduce operator strain by 50% when handling 45lb irrigation rolls, integrating servo-driven rollers, a calibrated pressure system, and a rotary base with fixed Z-axis.

ACADEMIC EXPERIENCE

PSI Plastics **Zapopan, Mexico**
Plastic Injection Mold for Flower Pots *Mar 2023 - Jun 2023*

- Led a team of four to design a manufacturable, two-piece self-watering flower pot optimized for injection molding.
- Conducted advanced **Finite Element Analysis (FEA) in SolidWorks** to verify critical stress points and optimize component geometry for robust high-tolerance performance.
- Designed the mold implementing rigorous **Design for Manufacturing/Assembly (DFM/DFA) principles**.

Jalisco Government **Guadalajara, Mexico**
Reciprocating Pump Design *Feb 2022 - Jul 2022*

- Designed a bicycle-powered reciprocating pump to supply water to off-grid households, targeting 40–60 RPM and 50–150 W of human power.
- Simulated three mechanical configurations using **SolidWorks**, **MATLAB**, and **Ansys**, analyzing piston displacement, torque requirements, and dynamic behavior.

EDUCATION

ITESM **Guadalajara, Mexico**
BS in Mechanical Engineering

Public University of Navarre **Pamplona, Spain**
Program abroad with a concentration in prototyping and manufacturing engineering

SKILLS

Precision Design: GD&T Methodology, **DFM/DFA**, Kinematic Design, Thermal & Fluid Mechanics, Mechanical Component Design.

Engineering & Design: Finite Element Analysis (**FEA**), Siemens Teamcenter (**PLM**), Displacement Measurement, Prototyping, Measurement Uncertainty.

Software: SolidWorks, **CATIA** V5, **NX** Siemens, Ansys (FEA), **AutoCAD**, Inventor, **Matlab**/Simulink, CAM Software.