

JAVIER AROCHA

U.S. Citizen

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Professional Summary

Experienced mechanical design engineer skilled in aerospace tooling, CAD modeling, GD&T, and additive manufacturing. Proven ability to streamline manufacturing processes, improve product quality, and develop custom tools that increase efficiency and reliability in aviation environments.

Experience

Crew Tools

Orlando, FL

Design Engineer

Sep. 2024 – Sep. 2025

- Designed and tested pneumatic hoses to maintain precise pressure (44–48 PSI) for sealant pressure guns, ensuring reliability and safety.
- Performed quality inspections on a variety of tools using Hexane testing process, the FT-IR material test and dimensional verification to confirm precision with technical drawings and specifications.
- Designed and developed sealant application and removal tools tailored for aerospace standards as specified by Spirit.
- Improved tool designs to enhance quality, usability, and efficiency while also complying with industry standards.

Airgroup Dynamics Inc.

Orlando, FL

Mechanical Engineer

May 2021 – Sep. 2024

- Designed innovative tools to streamline the assembly and disassembly of aircraft components, reducing process time by 20%.
- Created over 50 technical drawings for components, applying ASME Y14.5 GD&T standards. Established 3D printing department, enhancing prototyping productivity by 30% through additive manufacturing.
- Developed and implemented procedures for component diagnosis, improving operational efficiency.
- Conducted quality assurance assessments, ensuring compliance with FAA standards.
- Regularly updated and audited over 3000 capability folders, identifying needs for additional tooling.
- Performed various manufacturing processes, such as turning, CNC, and milling on stainless steel and aluminum.

Florida Space Institute

Orlando, FL

Engineer Intern

Jan. 2021 – May 2021

- Conducted research on regolith behavior in zero-gravity and sub-freezing temperatures in collaboration with UCF and NASA.
- Applied engineering principles to perform and analyze collision experiments, improving understanding of regolith behavior.
- Developed testing and assembly procedures for integrated hardware used in space projects.

Education

University of Central Florida – *Bachelor of Science in Aerospace Engineering*

May 2024

Miami Dade College – *Associate of Arts in Mechanical Engineering*

May 2020

Certifications

SolidWorks: CSWA: Associate - 2021, CSWPA: Drawing Tools - 2022, CSWP: Professional - 2023

Six Sigma: White Belt - 2024

Skills

Software: SolidWorks, Fusion 360, AutoCAD, Microsoft Office

Technical: ASME Y14.5 GD&T, CNC machining, manual milling, 3D printing, FT-IR

Languages: English (Fluent), Spanish (Native), HTML (basic), C++ (basic), MATLAB (basic)