Steven Gallaga

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Portfolio: Gallagasportfolio.com

Experience

2026 – Present
Facilities and Quality Engineer | Prodigy Surface Tech

- Designed, fabricated, installed, and maintained industrial hardware and infrastructure, including gas/water systems, electrical components, heat exchangers, equipment mounts, and custom tooling.
- Built and iterated custom hardware using soldering, brazing, drilling, mechanical fastening, and fiberglass fabrication; developed BOMs, assembly procedures, SOPs, and maintenance plans.
- Collaborated with engineering, manufacturing, quality, management, and customers to troubleshoot hardware, coordinate testing, implement design changes, and validate facility and process improvements.
- Performed root-cause and failure analysis, discrepant-material investigations, XRF verification, and process testing to identify issues, validate solutions, and improve hardware reliability and manufacturability.

2025 – 2026
Chief Scientist | NASA Proposal Writing & Evaluation Experience Academy

- Lead development of a solar sail architecture using liquid-crystal dielectric edge strips to modulate reflectivity, torque, and center-of-pressure for attitude control.
- Guide a team of 11 through system trades, configuration development, mission use-cases, and NASA-aligned deliverables including quad charts and down-selection packages.
- Establish collaborative workflows, meeting cadence, shared documentation, and cross-team integration while preparing pitch-ready proposal materials.

2024 – 2025
Mechanical Engineering Intern | ALEF Aeronautics

- Led end-to-end mechanical design of eVTOL flight system components in SolidWorks, from concept through testing and iteration, including battery enclosures, chassis integrations, and test fixtures.
- Collaborated with lead engineers and manufacturers through design reviews to meet tolerance and material constraints; prepared parts for 3D printing using Ultimaker Cura.
- Contributed to in-shop fabrication through carbon fiber vacuum bagging, mold creation, curing, and hands-on prototyping.
- Maintained daily project updates and design changes via Discord and Google Sheets

Education

BS: Aerospace Engineering
San Jose State University

Design & Analysis Skills

SolidWorks
NX Siemens
AutoCAD
Ultimaker Cura
MATLAB
C++
Python

Prototyping & Fabrication Skills

Mechatronics
Mechanical Assembly
3D Printing
Electrical Wiring
Industrial Plumbing
Pipefitting
Copper Soldering
Plastic Welding
Composite Work
Plastic Work
Metalwork
Woodwork