Michael DiNardo

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**Education**

**The University of California, Santa Barbara** - Bachelor of Science in Mechanical Engineering **June 2019 – June 2022**

Ventura College, Ventura – Associates in Natural Science & Mathematics  **Jane 2016 – May 2019**

**Work Experience**

**(Sep 2022 – Present) Northrop Grumman Space Systems — Industrial Engineer**

* Designed precision tooling for spacecraft component bonding using Creo, ensuring accuracy and repeatability.
* Created and maintained detailed engineering drawings for clear communication with machine shops, achieving 100% first-pass yield.
* Utilized rapid prototyping to validate designs within 24 hours, facilitating efficient development cycles.
* Developed free body diagrams to ensure safe use of critical tooling and prevent potential employee injuries.
* Automated Bill of Materials (BOM) cleanup using VBA scripts, reducing part ordering lead times by 75%.
* Improved cleanroom layout to enhance workflow and achieve a 20% production efficiency gain.
* Conducted 5S audits to optimize work cell layouts and led teams in safely relocating million-dollar equipment.

**(Jul 2021 – Dec 2021) Tesla Automotive (Internship) — Mechanical Design Engineer**

* Designed thermal coolant lines and fasteners for various Tesla models (S, 3, X, Y) and Cybertruck using Catia V5 & V6, prioritizing manufacturability, ergonomics, serviceability, and reliability.
* Effectively communicated designs to international suppliers to ensure adherence to production specifications.
* Developed testing procedures for hose clip durability, quick connector leaks, and coolant particulates, resulting in improved component performance.
* Assisted in vibrational durability and noise, vibration, and harshness (NVH) testing, contributing to enhanced reliability and noise isolation of the Tesla heat pump assembly.

**(Nov 2019 – Aug 2020) Rocket Propulsion Laboratory (RPL) at UCSB — Design Engineer**

* Designed and prototyped a compact retractable air-brake system for an F-class rocket, optimizing strength, weight, and aerodynamic performance through fluid analysis simulations.
* Gained valuable experience in air-brake design, data acquisition & analysis, and design optimization.

**(Oct 2008 – Jan 2016) DiNardo Glass — Owner, (Glass Artist, Design, Manufacturing, & Sales)**

* Led the design, manufacturing, and sales of complex glass sculptures, flutes, lighting fixtures, and decorative elements.
* Developed and implemented manufacturing processes for hot and cold glass working, including annealing specifications for product quality.
* Created custom tooling, jigs, and ground support equipment to streamline production processes.
* Hand-crafted intricate glass art using specialized techniques and equipment.
* Designed and built four glass production facilities, ensuring proper ventilation, high-pressure oxygen/fuel lines, and electrical systems for annealing kilns.
* Developed and delivered training curriculum for basic and advanced glassblowing techniques to 25 students.

**(Sep 2005 – Aug 2009) U.S. Army — (25Q) Multi Transmission Systems Operator**

* Provided uninterrupted communication for thousands of soldiers during wartime in Iraq by setting up, operating, and maintaining mobile encrypted line-of-sight radio systems.
* Installed and maintained multichannel line-of-sight and tropospheric scatter communication systems, antennas, and diagnostic equipment.
* Ensured mission readiness by maintaining diesel-electric generators and Humvees.

**(July 2001 – Aug 2005) Independent Contractor — Skilled Craftsman (Glass Artist)**

* Contributed to high-volume glass art production, handcrafting hundreds of pieces per month while meeting strict quality and durability standards.

**Relevant Projects**

**(Aug 2019) Expanding Hoberman Linkage Systems (www.DiNardoEngineering.com)**

* Developed a method using SolidWorks to expedite the design of complex expanding truss structures.
* Created a JavaScript graphical calculator to calculate, display, and animate Hoberman linkage systems.

**Technical Skills**

Product Design, Tooling Design, DFM, GD&T, SolidWorks, Creo, Catia, FEA, Rapid Prototyping, G-Code, MATLAB, Simulink, VBA