

Kyle Blanset

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Education

Yale University, M.S. Mechanical Engineering	<u>Completed</u> May 2026
University of California, Berkeley, B.S. Mechanical Engineering	May 2025, GPA 3.57
Laney College, Engineering	May 2023, GPA 4.00
SOLIDWORKS, Professional Certificate in Mechanical Design	November 2021

Skills

- Manufacturing – 3D printing, CNC, weldments, composites, molds, GD&T, drawings, testing.
- Software – Solidworks, Creo, Fusion 360, Ansys, Matlab, C++, VS Code, Excel, micro-controllers.
- Interpersonal – Technical leadership, Cross-disciplinary collaborating, presentations, instructing.

Projects

- **Continuous Composites 3D Printer** – Developed a novel method of fiber layup into 3D printed parts by redesigning a 3D printer's XY gantry in SolidWorks and coding a matlab script to modify Gcode. Sample parts were designed per ASTM D638 and tensile tested. Invited to present at ICAM 24.
- **Six DOF Stewart Platform** – Computer vision controlled platform to balance an object. Programmed a microcontroller in C++ to utilize real-time programming and custom PWM control, GUI in LabVIEW.
- **Carbon Fiber Road Bike** – Improved carbon fiber tube manufacturing by using water-soluble 3D printed mandrels and programming a CNC tube winder. Designed compression molds.
- **Underwater Remote Operated Vehicle** – Designed propulsion system, created CAD models with PTC OnShape, and made bill of materials for mechanical and electrical systems.

Professional Experience

Graduate Researcher, Yale University August 2025 – Present

Conducted experimental research in adaptive soft robotics focused on underwater layer jamming.

- Designed and built a force-displacement test machine to fit within a pressure vessel to simulate underwater environments, providing data to improve layer jamming system.
- Developed a mathematical model for layer jamming slipping to inform engineering decisions.

Mechanical Engineer Student Assistant, Berkeley Lab

June 2023 – July 2025

Performed design and analysis work for the LHC particle accelerator resulting in the largest carbon fiber instrument shells produced at LBNL, trusted with the manufacturing of over \$320,000 worth of tooling.

- Designed parts and created drawings using Creo Parametric CAD with Windchill as the product life cycle manager. Simulated assemblies in the FEA program ANSYS for stress, bending, and modal characteristics.
- Achieved parallelism of under 50µm between carbon fiber flanges 3m apart by designing high-precision fixtures and writing an accompanying detailed work procedure for assembly.
- Designed kinematic fixtures and 3D printed vacuum chucks for high-precision part alignment.

Propulsion Systems Mechanic (MMN), United States Navy

June 2015 – June 2021

Submarine mechanical technician and team leader for nuclear reactor refueling and sea-going operations.

- Managed USS Wyoming's Quality Assurance program as Assistant Quality Assurance Officer; technical lead for submarine QA program. Contributed to "Excellent" Squadron 16 audit rating.
- Developed standalone maintenance and testing procedures from complex manuals/drawings; awarded two Navy & Marine Corps Achievement Medals.
- Supervised 5 mechanics during reactor operations and casualty response with a perfect safety record.

Community Involvement

- Officer, Pi Tau Sigma–Redesigned PTS website, organized initiate events. August 2024–May 2025
- Sailing Instructor, Cal Sailing Club–Gave lessons to intermediate sailors. June 2024–July 2025
- President, Laney Engineering Club–Organized events, increased membership. May 2022–May 2023