

Samuel Dearing

Phone: 602-760-7761

Email: samueldearing@outlook.com

Relevant work experience

Generator Technician | Landco Power | Tempe, AZ

12/2024 - Present

Hours per week: 20

- Diagnosed and repaired industrial generators up to 320 kW across fuel, intake, relay, wiring, sensor, and control faults in shop and field environments supporting a fleet of roughly 70 units.
- Restored failed equipment under high-pressure job-site conditions, often without schematics or prior fault history, using systematic troubleshooting to return units safely to service.
- Applied systems-level understanding to repair subcomponents rather than replace full assemblies, reducing downtime and avoiding thousands of dollars in unnecessary replacement costs.
- Designed and fabricated custom replacement parts in SolidWorks, including cable connectors, strain reliefs, magnetic pickups, and distribution-panel hardware, extending service life when OEM parts were unavailable.
- The printed connector/strain-relief replacements were used to repair at least 30 damaged cables; original connector pairs cost about \$150, and supports more than 300 shop cables.

Engine Team Member | Formula SAE | Arizona State University, AZ

01/2026 - Present

Hours per week: 12

- Designed, fabricated, installed, and tested chassis-mounted components including the PDM plate, ignitor plate, E-kill switch plate, and radiator fan shroud for a tightly packaged student-built race car.
- Reoriented the PDM mounting plate so cooling fins faced oncoming airflow, improving cooling, wire routing, serviceability, and access while maintaining structural strength.
- Supported torque-management and traction-control integration by working with members in drivetrain and data acquisition while analyzing ECU logs for data.
- Used ANSYS and iterative CAD evaluation to balance radiator-fan shroud performance and size before fabrication.

Advanced High Power Rocketry Team Member | Sun Devil Rocketry | tempe, AZ

11/2025 - Present

Hours per week: 6

- Supported high-power rocket development through OpenRocket modeling, fiberglass part manufacturing, avionics-bay CAD, and camera-mount design.
- Designed compact avionics-bay and camera-mount solutions to fit within rocket diameter constraints while protecting onboard electronics from vibration and integration issues.
- Supported black-powder deployment testing by setting e-matches, verifying wiring, checking continuity, and assisting recovery-system and payload integration activities.

Company Commander | Marine Military Academy | Harlingen, TX

08/2021 - 05/2023

Hours per week: 40

- Led and mentored 60 cadets in a structured military academic environment, maintaining accountability, discipline, and performance standards while supporting academic and leadership development.
- Shifted company leadership from a fear-based model to a servant-leadership approach, improving accountability, morale, and unit performance.
- Led the company to four consecutive Golden Guidon wins and received the Colonel H. William Card Jr. Leadership Award.

Independent Developer | Independent Engineering Projects | Phoenix, AZ

08/2024 - Present

Hours per week: 10

Tracked Robotic Platform

- Designed and integrated a tracked robotic platform using Raspberry Pi, LiDAR, a camera, motor controllers, displays, and DC-DC power conversion.
- Built regulated power distribution for 12 V and 5.5 V subsystems and developed Python-based control software with a local web interface for real-time driving and live video streaming over a secure LAN.
- Conducted systematic hardware and software debugging to isolate and replace a failed motor controller, restoring full system functionality.

Directional Guidance / POI Compass

- Developed a navigation prototype combining IMU, magnetometer, GPS, barometer, a servo, and embedded display output to point toward predefined points of interest.
- Reduced electrical noise through capacitor selection and placement and achieved a 10 Hz update rate with fallback behavior for GPS-limited indoor environments.

- Applied sensor calibration and analyzed outputs to improve directional accuracy and system reliability.
- Heavy Machinery Smart Key
- Designed and prototyped an electronic keypad-based control system for heavy equipment with operator authentication, runtime logging, and GPS-ready tracking architecture to improve accountability and reduce unauthorized use.
 - Used modular design practices to support future expansion into telemetry and fleet-management functions.

Team Member | Underwater Robotics / MATE ROV Team | Tempe, AZ

02/2026 - Present

Hours per week: 6

- Assemble, solder, and perform continuity checks on the SeaMATE Eagle Ray controller, Arduino Mega 2560, and Eagle Ray power supply before final system integration.
- Support electronics integration for a competition ROV platform while contributing to ongoing manipulator-arm development.

Education, certification or licenses

Arizona State University | Tempe, AZ

Completion date: 05/2028

Some college (no degree) | GPA: 3.82 of a maximum of 4 | Credits Earned: 51

Major: Aerospace Engineering (Astronautics)

Engineering Mechanics, Differential Equations, Circuit Analysis, Materials Science, Programming for Engineers, Embedded Systems Fundamentals.

U.S. Military Academy Preparatory School | West Point, NY

Completion date: 07/2024

Some college (no degree)

- Completed a rigorous military and academic preparatory program emphasizing mathematics, physics, leadership, discipline, and time management; placed 43rd in a class of 203.
- Served as Platoon Sergeant, leading 40 soldiers in a demanding training environment while maintaining accountability, readiness, and support under high-stress conditions.

Marine Military Academy | Harlingen, TX

Completion date: 05/2023

High school diploma or equivalent

Job-related training

Army Officer Professional Development Training

U.S. Army / Cadet Command 2023–2024

Completed structured leadership and professional development curriculum covering decision-making, accountability, ethical leadership, and organizational management in high-performance environments.

Equal Opportunity and Healthy Work Environment Training

U.S. Army 2023–2024

Completed training on maintaining professional standards, fostering inclusive work environments, and upholding integrity and ethical conduct.

Additional information

TECHNICAL SKILLS: SolidWorks, ANSYS (basic), OpenRocket, Python, Raspberry Pi, Linux, embedded systems, sensor integration, wiring, soldering, troubleshooting, fault isolation, system integration, data analysis, 3D printing, fiberglass fabrication, testing and validation

Lived internationally and worked within diverse cultural environments, strengthening adaptability and cross-cultural communication skills. Pursues independent engineering projects outside of coursework to expand technical skill set in embedded systems, CAD, and sensor integration. Actively working towards CAD, Programming, and analysis software certifications.