EVAN J. LONG
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EDUCATION

The University of Texas at Austin – Austin, TX
Bachelor of Science in Mechanical Engineering, GPA: 3.80/4.00 ---------- (August 2023 – May 2027)
Relevant Coursework: Heat Transfer, Mechatronics, Fluid and Solid Mechanics, Materials, Programming, Calculus, Eng. Projects.

The University of New Mexico – Los Alamos, NM
Professional Certificate in Robotics, GPA: 3.86/4.00 ---------- (May 2021 – May 2023)
Relevant Coursework: Industrial Robotics, Manufacturing Techniques, Drafting and CAD, Fluid, Cryogenic and Vacuum Systems

EXPERIENCE

Texas Rocket Engineering Lab (TREL) – Austin, TX
Test Engineer, Ground Fluids Responsible Engineer ---------- (January 2024 – September 2025)

- Advanced to Ground Fluids Lead in my second semester, outcompeting senior members, and immediately set a new pace—expanded the project from just one incomplete GN2 panel to six critical GSE systems, fully operational and test-ready, despite major reductions in team size and resources.
- Delivered seamless integration and field-readiness of RP, LOx, Helium, Igniter, and FireX panels by streamlining procurement, hands-on fabrication, and strategic trailer layout; rapidly adapted system architecture to shifting rocket requirements, directly accelerating TREL's launch schedule and enhancing reliability for all test operations.
- Refurbished and integrated our mobile high pressure water system ('hydrocart') along with manufacturing tubing and a blast shield in order to proof and autofrettage Composite Overwrap Pressure Vessels (COPVs). Assisted in proofing 2 flight COPVs, and testing another for GSE use.
- Determined requirements for, designed, ordered parts for, assembled, and physically implemented nearly the entire FireX system for the engine bay, safeguarding high-risk hardware against potential fire threats while integrating seamlessly with existing fluids, hardware, and software infrastructure.
- Wrote testing procedures on Epsilon3 for LOx, RP, and full Rocket fill/drain; Cold Flow; and Stage Test. Personally conducted LOx and RP Fill/Drain testing. Wrote Autosequences on Excel for an automated LOx COPV fill test, while communicating with Software to ensure seamless integration into existing architecture.
- Developed and conducted presentations to higher ranking members and "mentors" (topic-specific industry professionals) for Preliminary and Critical Design Reviews and Test Readiness Reviews.

Systems for Augmenting Human Mechanics (SAHM) Lab – Austin, TX
Undergraduate Researcher, General Engineer ---------- (October 2023 – December 2024)

- Developed custom orthoses to assist patients with impaired mobility, creatively redistributing muscle load to improve gait and reduce risk of falls.
- Established and implemented an electromyography (EMG) system for nuanced neuromuscular signal analysis, converting real-time activity into actionable lab data and controlling both simulated and real prosthetics.

Nuclear and Applied Robotics Group (NRG) – Austin, TX
Engineer ---------- (January 2024 – May 2024)

- Designed and prototyped electro-mechanical components for clay 3D printing, developing new CAD models and physical protoypes weekly. Owned the entirety of the extruder assembly, effectively integrating a motor, casing, and augur.
- Elevated team performance by sharing coding resources, iterating on feedback, and helping secure a 2nd place FIRE cohort research award through strong initiative and clear communication of project outcomes in a presentation.

Relevant Projects – UNM Los Alamos, NM

- Built and tested a pneumatic robotic tank, a 4WD off-road vehicle, and a 4-motor dragster, with incredible achievements in power, degrees of freedom, terrain versatility, and overall speed respectively.
- Devised creative end effectors for and programmed FANUC industrial robot complex tasks such as pouring and serving tea, and painting and moving boxes -- demonstrating rapid solution development and process automation.

COMMUNITY INVOLVEMENT

Helping Hand Home (HHH) – Austin, TX ----------(November 2024 – Present)

- Connected with underserved youth through fun and engaging STEM demos, like bottle rockets and marble rollercoasters.
- Devised the requirements and procedures for these demonstrations, then sourced parts and instructed other volunteers.

RELEVANT SKILLS

Modeling Software: SolidWorks (CAD, FEA, CAM), Ansys, OnShape, SketchUp, Fusion360 (CAM), FDM & SLA 3D Printing
Programming & Electronics: Python, MATLAB, C++, ROS, LabView, Arduino, Mechatronics
Certifications: FANUC Industrial Robot Technician, Machine Shop, PLC, Safety (Fire, Cryogen, Compressed Gases, Lab General)