EVAN J. LONG
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EDUCATION

The University of Texas at Austin – Austin, TX ---------- *Aug. 2023 – Dec 2026*
Bachelor of Science in Mechanical Engineering | GPA: 3.71/4.00
Relevant Coursework: Machine Elements, Material Analysis, Fluids / Heat Transfer, Robotics, Dynamic Systems and Controls, Coding.
The University of New Mexico - Los Alamos – Los Alamos, NM ---------- *May 2021 – May 2023*
Certificate in Robotics | GPA: 3.86/4.00
Relevant Coursework: Advanced/Industrial Robotics Projects; Manufacturing Techniques; Hydraulic, Cryogenic, and Vacuum systems.

EXPERIENCE

Ukrainian Drone Development – *Volunteer R&D Engineer* ---------- *Jul. 2026 – Present*
- Created all mechanical components for a battery-dropping mechanism adaptable to the Vyriy 10, 15, and Blyskavka drones.
- Determined requirements for, sourced, and tested electronics configurations for the system, reducing total cost to ~$15
- Conducted fluids analysis and used the Center of Gravity/Center of Pressure to predict flight characteristics.

ADAPT Prosthetics for Animals – *Technical Director, Prosthetics Design and Analysis Specialist* ---------- *Jan. 2026 – Present*
- Taught members how to conduct effective analyses of their parts, reducing material use through SolidWorks static studies.
- Conducted photogrammetry on a dog's leg to create a snug, durable, comfortable prosthetic to ease her pain while walking.
- Led a team in calculating stresses and expected life, and analyzing different manufacturing procedures for the prosthetics.
- Advised and provided technical support to all project teams, adapting existing objects to make them accessible to patients.

Hello Maker Studio – *Maker / Mentor / Researcher* ---------- *Aug. 2024 – Present*
- Designed and produced various low-cost scientific apparatuses for CNS research labs, streamlining their process workflows
- Developed comprehensive machine training modules, and implemented a feedback loop to improve user experience.
- Mentor students and faculty across colleges and disciplines to refine their designs and manufacturing techniques.

ASCEND Paraglider – *Chief Mechanical Engineer* ---------- *Jan. 2024 – Present*
- Responsible for creating an autonomous flying vehicle with 85kg thrust and a 300kg max takeoff weight from a stock ATV.
- Designed and produced low-cost test stands to verify thrust specs and fine-tune the motor and propeller arrangement.
- Conceptualized, designed, analyzed, and constructed a welded tube steel frame to mount our battery and electronics.
- Lead efforts to create a high-speed lightweight winch-based actuator optimized for fast and accurate parafoil control.

Texas Rocket Engineering Lab (TREL) – *Ground Systems – Vehicle/Stage Test Fluids Responsible Engineer* -------- *Jan. 2024 – Aug. 2025*
- Quadrupled hardware output over previous semesters despite team size halving through leading the ground fluids team in developing infrastructure to store/transfer: gaseous hydrogen, gaseous and liquid oxygen, helium, nitrogen, RP-1, and water.
- Enhanced project planning, documentation, and parts sourcing; fostering collaboration with electronics hardware, software, and structures teams to establish reliable testing protocols and autosequencing while managing P&ID creation and analysis.
- In overseeing the design, testing, and integration of fluid systems, prioritized safety, effectively managing risks associated with dangerous cryogens, high pressure oxidizers, and fuels; developed nearly the entirety of the FireX system by optimizing layout and pressure specifications to effectively protect the engine bay, seamlessly integrating with other test hardware.
- Pioneered a mobile GSE trailer, redesigning and reassembling different transfer configurations from changing requirements.
- Redesigned and rebuilt a “Water Flow Test Stand”. Sized orifices to deliver specific flow characteristics to test components.

Nuclear and Applied Robotics Group (NRG) – *Undergraduate Researcher (FIRE)* ---------- *Jan. 2024 – May 2024*
- In a team of 3, developed a cutting-edge 6DOF Ceramic 3D Printer module, adaptable to any URD3 robotic arm.
- Owned the entire extruder assembly, prototyped complex housing and augur geometries to evenly lay high-viscosity clay.

Relevant Course Projects, UNM – *Robotics Student*---------- *May 2021 – May 2023*
- Designed, built, and wired a functional robotic tank featuring a high-powered 2-axis pneumatic cannon. Its abilities were put on display by the university. I was appointed ambassador to local schools, encouraging students to join a robotics program.
- Developed end effectors for and programmed a FANUC standard industrial robot, enabling it to make, pour, and serve tea

COMMUNITY INVOLVEMENT

Helping Hand Home – Austin, TX ---------- *Jan. 2025 – Present*
- Created, tested, sourced parts for, and performed fun interactive Science Demos to nurture students interest in STEM fields.
- Forged valuable personal relationships with children (age 7-12) who require more attention that foster care can provide.

RELEVANT SKILLS

- **Design Software**: SolidWorks (including FEA), OnShape, SketchUp, Fusion360 (CAM), MakeraCAM, SimScale CFD
- **Robotic Systems and Programming**: Python, C++, ROS, General Electronics Layout and Assembly. Arduino/microcontrollers
- **Technical Certifications**: FANUC Industrial Robot Technician I and II, Programmable Logic Controllers, Safety Certifications (Fire, Cryogen, Compressed Gases, General Laboratory), Manual Machining, CNC Mill/Router, Woodshop, 3D Printing.