

Blase Londoño

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Education

University of California, San Diego, B.S. Mechanical Engineering Expected Fall 2027

- GPA: 3.94/4.00

University of California, San Diego, M.S. Mechanical Engineering Incoming Fall 2028

Experience

Mechanical Engineering Intern, Odin Dynamics, Inc. Sep 2026 – Present

- Owning full-vehicle wire harnessing; hand-specified 70+ harness drawings in Siemens NX (component STEP, instrument ICDs), material procurement, service loops, RFQs, 1:1 technical calls with suppliers, outsourced fabrication
- Owning full RF communication mast mechanical design and integration; hand drag calculations, Siemens NX assemblies, CFD for drag reduction and wake effects on thruster
- Built test rigs and ran DAQ for sonar, DVL, and INS/GPS field testing, assisted with nickel fuse-foil blowout testing on custom battery packs

Mechanical Engineering Intern, NASA Ames Research Center, NFAC Jun 2026 – Aug 2026

- Designed instrumentation mounting hardware and wire routing in SOLIDWORKS for full-scale aerodynamic testing; produced DFM/GD&T drawings approved by aircraft mechanics and released for outside fabrication
- Diagnosed signal clipping on Pacific Instruments strain-gauge boards; designed low-cost KiCad adaptor PCB to correct signal reference, recovered 2 channels/board scaled across several hundred facility DAS boards
- Rapid-prototyped modular vane set redesign in SOLIDWORKS for 1/50th-scale wind tunnel testing; 3D-printed airfoils, steel-reinforced to withstand 150 kt airflow

Electromechanical Engineer, UCSD Yonder Dynamics Oct 2024 – Present

- Designed and built carbon fiber Mars rover wheel hubs; wood-lathed mold, 3-ply vacuum-bag wet layup, CNC post-processing; cut hub mass 50% on a rover within 2 kg of the 50 kg competition limit
- Designed TPU fin-ray compliant gripper for rover manipulator; FDM-printed ASA housing, heat-set inserts, rubber-laminated contact surface; fielded on 2026 competition rover
- Designed 24V/60A power distribution PCB in Altium; current-scaled traces, thermal pours, fuse LEDs; 20% smaller

Research

Undergraduate Research Assistant, Gravish Bioinspired Robotics Lab Apr 2026 – Present

- Implemented CAN bus network on Raspberry Pi to increase closed-loop control bandwidth for five-bar legged robot testbed; soldered/configured ODrive v3.6 controllers with Quantum MT5208 motors and encoders
- Diagnosed driver conflicts and specified ODrive S1/CAN HAT upgrade to prevent future bandwidth bottlenecks

Projects

Machining Seminar Kinematic Launcher Mar 2026 – May 2026

- Manufactured spring-loaded kinematic launcher from supplied drawings; CNC-milled Delrin body/ball holder, CNC-lathed aluminum nozzle; manual-milled aluminum base plates and struts, manual-lathed firing pin
- Held ± 0.003 " across all mating features

Thermoacoustic Refrigerator Project Feb 2026 – May 2026

- Designed and manufactured thermoacoustic refrigerator (acoustic pressure heat pump) as project lead
- Modeled acoustic pressure in ANSYS Fluent, found resonator natural frequency for heat stack staging
- Achieved 4°C temperature drop

Skills

Hardware: Wire Harness Design, Test Fixtures & DAQ, Composite Layout, CNC & Manual Machining, DFM, GD&T, Embedded Systems, Soldering, 3D Printing, Laser Cutting

Software: Siemens NX, SOLIDWORKS, Onshape, Fusion 360, ANSYS Fluent, Altium Designer, KiCad, MATLAB, Python