

Connor Houle

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Education

University of California, Los Angeles; B.S. Mechanical Engineering, Class of 2029: GPA 3.95/4.00

- Relevant Coursework: Linear Alg, MATLAB Programming, Mat Sci 104, Multivariable Calculus, Physics Mechanics
- In Progress (Fall 2026): Statics, Thermodynamics, Differential Equations, Electricity & Magnetism
- James N. Harger Scholarship and Muriel K. & Robert B. Allan Fund award recipient

Experience

Mechanical Engineering Intern; Planewave Inc — May 2026 - Sept 2026

- Supported manufacturing, testing, and R&D for RF space antennas, amplifiers, and test hats
- Designed custom manufacturing fixtures increasing production speed by 150% and 80% for two in-house products
- Coordinated with vendors to source custom AS9100-rated hardware for new RF product lines
- Established new manufacturing processes that increased product pass rate by 10x for in-house products
- Designed drawings for 10+ new products, applying ASME Y14.5 GD&T standards to ensure seamless manufacturing

UCLA Undergraduate Researcher; Mechatronics and Controls lab; Professor Tsu-Chin Tsao, May 2026 - Present

- Lead mechanical design of a novel hexarotor AUV with full 6-DOF control, capable of operating in both air and water, rapidly transitioning between both mediums, and radially morphing to reduce underwater drag
- Developed the full CAD design for the project, prototyping and building the vehicle, integrating electronics, and developing the waterproofing scheme
- Running CFD Studies in SolidWorks Flow Simulation and ANSYS to characterize hull drag in air and water, size the propulsion system, and optimize mass distribution for neutral buoyancy

UCLA Undergraduate Researcher; Bionics lab; Professor Jacob Rosen, Jan 2026 - May 2026

- Designed and developed an animal-trial prototype of highly manipulatable 360° articulating colonoscopy snares, giving physicians improved access to remove pre-cancerous polyps during operations
- Led a five-person team; coordinated the project with physicians, faculty, and medical device suppliers, directed design and manufacturing efforts, and set team milestones

Bruin Formula Racing; UCLA — Sept 2025 - Present

- **Suspension:** Building a compliance test jig applying 1,000+ lbf along the lateral, vertical, or longitudinal axis to measure toe and camber compliance, validating simulation and comparing A-arm/control arm designs
- **Electrical Distribution System:** Developing a custom PCB through KiCad to evaluate and monitor battery packs: flagging abnormal power draw and charge overflow while estimating state of charge and pack health

Independent Drone Research; AP Research — Aug 2024 - March 2025

- Built a relay module that extends a drone's operational range using PPM signal refactorization: up to 82% increases
- Programed Arduinos to decompose a PPM signal into throttle, yaw, roll, and pitch arrays, transmit the information through the relay module to the drone, and reconstruct the PPM signal for continued flight control
- Authored a 5,000-word research paper on the development, build, and testing process; earned a 5 on the AP exam

Co-Founder; Auto Detailing Business, Bay Area — Oct 2023 - August 2025

- Cofounded a car detailing business to gain entrepreneurship experience; led customer relations and marketing.
- Generated \$14,000 in net profit and served 90+ clients

Skills

- **CAD/CAE:** SolidWorks, Fusion 360, SolidWorks Flow Simulation (CFD), ANSYS, MATLAB, GD&T, Solidworks Drawings
- **Manufacturing:** Haas CNC milling, waterjet, CAM (Fusion 360), TIG welding, SLA and FDM 3D printing, laser cutting
- **Electronics & Software:** KiCad PCB design, Arduino, Raspberry Pi, MATLAB, Java, JavaScript, web design