

Devin Yarak

devingyarak@gmail.com | (714) 863-4085 | devinyarak.com | U.S. Citizen

EDUCATION

San Diego State University B.S. Mechanical Engineering GPA: 3.4	May 2028
Orange Coast College A.S. Engineering GPA: 3.3	May 2026

ENGINEERING EXPERIENCE

Undergraduate Researcher, UAS Development FAA Part 107 Remote Pilot Certificate <i>Systems and Intelligence (SMILE) Lab, San Diego State University</i>	Sep 2026 - Present
• Configure PX4 autopilot parameters and filters and tune PID controllers for GPS-denied autonomous flight platforms; program and integrate ROS 2 software. • Develop an in-house small UAS platform targeting NDAA compliance, a 2 kg payload capacity, and positioning accuracy of ± 5 cm.	
Drivetrain and Cooling Team Member <i>SDSU Formula SAE Electric Racing</i>	Aug 2026 - Present
• Design and fabricate motor mounts and drivetrain brackets using SolidWorks and ANSYS FEA; reduce assembly mass 22% with a minimum 2.0 factor of safety. • Redesign cooling-system packaging and flow paths to reduce power consumption 42% and mass 18%; develop an 8-channel temperature and flow data-acquisition system.	
Mechanical Team Lead <i>OC Robotics, Orange Coast College</i>	Aug 2025 - Aug 2026
• Led an 18-member team through design and integration of a 48-kg rover; drove 40 hours of field testing to identify and resolve mechanical issues. • Designed 38+ components with SolidWorks and ANSYS FEA, reducing structural mass 17%; coordinated fabrication and tolerance reviews to achieve 95% first-pass assembly fit.	
Small UAV Propulsion Testing, Personal Project	Mar 2026 - Aug 2026
• Bench-tested 14 brushless motors and 16 propellers; measured thrust, torque, RPM, efficiency, and transient response to evaluate propulsion tradeoffs. • Calculated shaft power from torque and RPM; measured 22% higher mean mechanical efficiency at 300 gf for the tested 3.5-inch propeller group versus 3-inch props. • Developed performance rankings and component shortlists balancing thrust, mass, efficiency, and vibration; documented static-test limits and flight-validation needs.	

OTHER EXPERIENCE

Valet Parking Attendant SVS Parking	Feb 2026 - Aug 2026
Barista and Server Elixir Tea Bar	Jan 2025 - May 2026
Operations The Rinks	Mar 2023 - Jan 2025

TECHNICAL SKILLS

Autonomy and Controls: PX4 autopilot, ROS 2 programming and integration, PID tuning and filtering, Betaflight
Design and Analysis: SolidWorks, ANSYS FEA/CFD, MATLAB, Python
Test and Fabrication: Propulsion testing, data acquisition, Arduino/ESP32, FDM/SLA 3D printing, CNC milling and turning, laser cutting, welding, electrical assembly
Hobbies: FPV drone building and racing, Leatherworking, Rock climbing, Backpacking, PC building