ALEXANDER MASSOUMI

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EDUCATION

University of California-Irvine, Irvine, CA   Expected Graduation 2027
- *B.S. Mechanical Engineering, B.S. Aerospace Engineering*
- *Information and Computer Science, Minor*
- Certified Solidworks Associate (Mechanical Design)

PROJECTS

Solar Car, *Suspension & Steering Engineer*, UCI Solar Car, Zotsun   08.2025 - present
- Contributing to the design and development of the solar car's suspension and steering systems, creating CAD models, analyzing mechanical components, and assisting in the fabrication and assembly of steering and suspension assemblies

Curtiss JN-4 Biplane, *Fuselage Engineer*, Flying Leatherneck Aviation Museum   03.2025 - present
- Collaborating to build a scale replica of the Curtiss JN-4 "Jenny" biplane, interpreting engineering drawings, analyzing structural components, and assisting in the fabrication and assembly of the fuselage.

Fixed-Wing Aircraft, *Fuselage Engineer*, Fixed-Wing Innovation Project   01.2025 - present
- Collaborated in the design, 3D printing, and flight testing of a fixed-wing UAV for a multidisciplinary aerospace competition focused on additive manufacturing, flight performance optimization, and structural integrity.

Transit Bus Design: CAD Assembly & FEA Analysis, *Class Project*, MAE 52   09.2024 - 12.2024
- Created CAD model of a transit bus in Solidworks with motion and performed FEA analysis to find maximum loading.

FPV Drone, *Independent Project*, UAVs @ UCI   10.2024 - present
- Conducted research on unmanned aerial vehicle (UAV) components and custom-built a first-person view (FPV) UAV. Learned FPV freestyle, honing advanced flight control techniques, in order to successfully pilot the UAV.

Autonomous Robot, *Class Project*, MAE 106   01.2024 - 03.2024
- Utilized Arduino programming in C, 3d printing, and laser cutting to construct an autonomous rover that used a piston as propulsion and ackermann steering system, with a magnetometer, limit switch, and solenoid in measurement assistance.

RC Rover, *Class Project*, Introduction to Engineering I   09.2023 - 12.2023
- Built and designed a rover and its steering system using a servo motor to control the steering system and a receiver/transmitter to control the rover.

Website, *Independent Project,* anmassoumi.github.io   03.2024 - present
- Using HTML and CSS, I designed and coded my website on VS Code to showcase my projects.

WORK EXPERIENCE | VOLUNTEER EXPERIENCE | LEADERSHIP EXPERIENCE

MD Anderson Cancer Center, *Cancer Physics and Engineering Research Intern*, Houston, TX   06.2025 - 08.2025
- Developed an automated machine learning model to classify pancreatic cysts (high vs. low grade) using radiomic features from arterial phase CT scans (PyRadiomics). Implemented feature selection (LASSO, Sequential Backward Selection) and trained classifiers (KNN, Neural Networks) to improve clinical assessment of pancreatic cysts.

MotoGP, *Track Marshal*, Circuit of the Americas, Austin, TX   03.2025 - present
- Served as a track marshal for the 2025 MotoGP at the Circuit of the Americas through the Sports Car Club of America (SCCA) and MotorsportReg, supporting real-time race operations, rider safety, and incident response with teams in their pit-lane garage.

Sigma Gamma Tau, *National Aerospace Engineering Honor Society Member*, UC Irvine, CA   10.2024 - present
- Inducted into Sigma Gamma Tau, the National Aerospace Engineering Honor Society, for academic excellence and leadership in the field of aerospace. Required to be top one-fifth of the sophomore class to be invited.

UC Irvine Parking and Transportation Services, *Anteater Express Operator*, Irvine, CA   08.2024 - present
- Class B licensed Anteater Express bus driver. Responsible for the inspection and safe operation of shuttle service buses at UC Irvine. Responsible for the safety and well-being of 250+ passengers per shift.

Engineering Student Council, UC Irvine, CA   10.2023 - present
Faculty Engagement Committee (10.2024 - present)
- Promote student-faculty interaction for the educational, social, and professional advancement of the engineering community at UCI. Create networking and research opportunities with other organizations, businesses, and faculty.

Galileo Camps, Irvine, CA   06.2022 - 08.2024
Lead Instructor (06.2024 - 08.2024)
- Led STEM sessions for children, designing hands-on projects and lesson plans to enhance learning. Fostered an inclusive environment, inspiring creativity and curiosity in campers.

TECHNICAL SKILLS

- *Software:* SolidWorks, MATLAB, Arduino, CSS, HTML, Microsoft Office, Python
- *Hardware:* 3D Printing, Laser Cutting, Fabrication Machinery
- *Skills:* Machine Learning, Critical Thinker, Highly Motivated, Organized