Milad Noah Mesbahi

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Education

University of Pennsylvania — Philadelphia, PA
M.S. Robotics — August 2024 - May 2026

University of California, Los Angeles — Los Angeles, CA
B.S. Mechanical Engineering — September 2020 - June 2024

Work Experience

NASA (Jet Propulsion Laboratory) — Pasadena, CA
Mechanical Engineering Intern — June 2023 - September 2023

- Led research project in vibration and shock mitigation in aerospace with novel damping material.
- Performed various vibrational tests coupled with FEM simulations, including modal analysis and MatLab post-signal processing, presenting promising findings to JPL's dynamics department.

UCLA Thermoscience Laboratory — Los Angeles, CA
Lead Undergraduate Researcher — October 2022 - June 2024

- Designed and conducted key experiments on string morphology in liquid film flows, uncovering insights for mass exchanger optimization.
- Developed custom MATLAB image processing algorithms and data cleaning techniques with a paper working toward publication.

Me and You Always - UCLA Social Network — Los Angeles, CA
Co-Founder & Entrepreneur — May 2022 - Present

- Developed and launched a community-focused social media app from scratch. Self-taught web development, UI/UX, and marketing, growing the user base to 3,000+ students.

Skills

Engineering Programming:	C++, Python, MatLab, ROS, Gazebo, Digital Signal Processing
Web Development:	JavaScript, CSS, HTML
Manufacturing:	Milling, Lathing, CNC, CAM, 3D Printing, Lithography, Photolithography
Engineering Design:	CAD (Solidworks/NX), FEA, FEM, ANSYS Fluent
Professionalism:	Adobe Premier Pro, Figma, MSSuite, Mac Software Bundle, & Google products

Technical Projects

Autonomous Rover
Engineered a wireless-controlled rover capable of autonomous navigation and environmental interaction, integrating embedded systems and control mechanisms.

Robotic Battle Bot
Led the design and construction of a one-pound combat robot. Finished 2nd place in student competition.

Robotic Arm Manipulator Design
CAD octopus-inspired robotic manipulator achieving six degrees of freedom with a mix of 60 unique parts.

Compliant MEMS micro-mirror system
Modeled a high-speed, precision flexure-based micro-mirror for adaptive optics, optimizing natural frequency and reducing unwanted motion.

Senior Capstone Project: Autonomous Rover 2.0
Mechanical design lead and programming co-lead for an autonomous rover with computer vision, object handling, and course navigation.

Relevant Coursework & Activities

Undergraduate Engineering Foundational Courses
Statics & Structures, Dynamics of Rigid Bodies, Advanced Fluids, Materials Science & Manufacturing, Heat Transfer, Electronics/Circuits, Dynamical Systems Modeling, Feedback & Controls, Engineering Thermodynamics, Ethics, Compliant Mechanisms, Advanced C++, Engineering Management/Finance

Masters Courses
Machine Learning, Machine Perception, Introduction to Robotics

Activities
Former President of Sigma Chi, Fitness enthusiast, Art Creation (Web Dev & Piano), Basketball, Reading