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

Blue Origin — Kent, WA
Guidance, Navigation, Control (GNC) Intern — May 2025 - August 2025
- Built a high-fidelity, auto-code-generating Simulink model for the electromechanical actuation of an upper stage rocket engine.
- I designed control laws, modeled motor/load dynamics, performed frequency analysis, and made the model compatible with flight hardware.

UPenn - George Pappas GRASP Lab — Philadelphia, PA
Multi-Agent Reinforcement Learning Researcher — September 2024 - Present
- Developing a multi-agent deep learning/GP framework for AUV fleet salinity mapping.
- Customized neural network architecture, reward structure, and GP regression to maximize fleet performance under dynamically changing environment. ICRA-2026 submission in preparation.

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.
- Designed various vibrational tests coupled with adjacent FEM simulations, including modal analysis and MatLab post-signal processing. Presented promising findings to JPL's dynamics department.

Me and You Always - UCLA Social Network — Los Angeles, CA
Co-Founder — May 2022 - August 2024
- Self-taught web development, UI/UX, and marketing. Grew the user base to 4,000+ students.

SKILLS

Engineering Programming:	Python, Matlab, C++, Git, Web Dev (JavaScript, CSS, HTML)
Robotics:	Machine/Deep Learning, Optimization, Controls, Computer Vision
Platforms & Libraries:	ROS, Gazebo, PyTorch, Simulink, Solidworks/NX, CVXPY, BoTorch
Engineering Design & Manufacturing:	Signal Processing, CAD (FEA/FEM), 3D Printing, Milling/Lathing

TECHNICAL PROJECTS

Autonomous VIO Quadrotor
Designed a GPS-free autonomous quadrotor with onboard planning, control, and vision-based state estimation for robust real-time navigation.

Capstone Autonomous Rover
Mechanical design lead and programming co-lead for an autonomous rover with computer vision.

BOWL (Bayesian Optimization for Wide Landscapes)
Designed and implemented a custom BayesOpt algorithm to more reliably find robust solutions in expensive black-box problems by favoring wide, generalizable regions of the search space.

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

Autonomous Pick-and-Place System
Built robotic arm pick-and-place algorithms capable of handling static & dynamic blocks.

RELEVANT COURSEWORK & ACTIVITIES

Masters Courses
Machine Learning, Machine Perception, Introduction to Robotics, Advanced Robotics, Bayesian Optimization, Convex Optimization, Principles of Deep Learning (Fall), Elements of Probability Theory (Fall)

Activities
Former President of Sigma Chi, Book club founder, Fitness enthusiast, Writing, Economics + Philosophy