

EDUCATION	Massachusetts Institute of Technology	Cambridge, Massachusetts
	<i>Course 6-5: Electrical Engineering and Computer Science</i>	c/o 2030
	Math Academy - Pasadena High School	Pasadena, California
	<i>B.S. Math Equivalent</i>	2018 - 2025
	Advanced proof-based mathematics through graduate-level topics (Topology, Galois Theory, PDEs, Differential Geometry, Combinatorics).	
	Eurisko	Pasadena, California
	<i>Accelerated Computer Science "degree" for Math Academy Students</i>	2022-2023
	Rigorous curriculum based off of MIT's Course 6-3. Completed 6-semester curriculum in one year.	
PUBLICATIONS	1. Matthew Paz A Sub-millisecond Fourier and Wavelet-based Model to Extract Variable Candidates from the NEOWISE Single-exposure Database <i>Astronomical Journal</i> , November 7 2024.	
	2. Matthew Paz et al. VarWISE: Variability in the Infrared via NEOWISE <i>Astrophysical Journal</i> , May 18 2026	
PROJECTS	Min-cost Planetary Actuator - YC Summer Grantee	
	<i>Granted \$20k. Design and proto-fabrication of the BOM-cheapest actuator available to America. 6-DOF YAM-arm analog demo.</i>	2026.06 - 2026.09
	The VarWISE Infrared Variability Survey	
	<i>IPAC/Caltech. ML-driven analysis on the entirety of the NEOWISE mission data in search of flux-variable objects.</i>	2024.04 - 2025.12
EXPERIENCE	Optica Industries Mechatronics Engineer	2026.06-2026.08
	- Design+fabrication for a scrap metal feeding and singulation conveyor system. - Optical modeling and microsecond control for pulsed laser, galvo and z-focuser laser-induced breakdown spectroscopy (LIBS). - Electronic design for system control. - Mathematical modeling for dimensionless complete system calibration.	
	OpenAI Inc. Associated Researcher	2025.08-2026.02
	- Project Launchpad student researcher, working alongside MTS. - Mechanistic interpretability and alignment, investigating mechanisms behind emergent model drives. - Discovered correlation between model self-identity and emergent self-preservation.	
	California Institute of Technology Research Staff	2023.06 - 2026.06
	- Led the VarWISE project, analyzing ~ 200TB of astronomical timeseries data. - Developed signal-processing models and low-level GPU kernels. 1000+ hour cluster inference runs. - Produced over a million candidate discoveries.	
	First Prize, Regeneron Science Talent Search ◦ Featured on Business Insider, Forbes, NPR and more.	2025
	Top 100, USA Mathematical Talent Search - Sponsored by NSA	2023-2024
AWARDS AND HONORS		