Rohun Agrawal

rohunagrawal@gmail.com
rohunagrawal.github.io

+1 (650) 944-9301
linkedin.com/in/rohun-agrawal/

EDUCATION	**California Institute of Technology**	2021 – 2025

B.S. Applied and Computational Mathematics
Minor: Computer Science
GPA: 4.1/4.3

EXPERIENCE

Caltech, Georgia Gkioxari Lab   January 2024 – Present
Advised by Prof. Georgia Gkioxari

- Developed an agentic program synthesis approach enhancing 3D spatial reasoning in AI, outperforming prior zero-shot models

Apple, Media Analysis Team   June 2024 – September 2024
Machine Learning Intern

- Implemented and trained deep models from scratch for a video-related task with a focus on improving inference speed for similar output quality
- Selected as 1 out of 10 interns to present to Craig Federighi, Senior VP and head of the Software Engineering Org

NASA Jet Propulsion Lab, ML Group   June 2023 – September 2023
Machine Learning Intern

- Researched calibration of a Gaussian Process Regression model for Martian frost likelihood
- Reduced calibration error by over 6x for more reliable uncertainty estimates, improving confidence in 63% of scientific regions of interest
- Generalized the DECISION backend for integration with Mars rover systems

Caltech, Katie Bouman Lab   January 2022 – June 2023
Advised by Prof. Oscar Leong

- Developed an alternating minimization algorithm that samples from a denoiser to solve nonlinear inverse problems that arise in medical and astronomical imaging

PUBLICATIONS

Visual Agentic AI for Spatial Reasoning with a Dynamic API
D. Marsilli, R. Agrawal, Y. Yue, G. Gkioxari.
Submitted to Conference on Computer Vision and Pattern Recognition (CVPR) 2025.

Holistic Mapping of the Present-day Martian Seasonal CO2 Frost: Part 1
S. Diniega, G. Doran, S. Lu, M. Wronkiewicz, J. Widmer, R. Agrawal, U. Rebbapragada.
Submitted to Planetary Science Journal.

Alternating Phase Langevin Sampling with Implicit Denoiser Priors for Phase Retrieval
R. Agrawal, O. Leong.
International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2023.

HONORS AND AWARDS	**Meta LLM Evaluation Research Grant** (for project with Prof. Gkioxari)	2024
	Caltech Athlete of the Year	2024
	NCAA All-Academic Honors - Track & Field	2024
	Housner Student Discovery Fund Recipient	2023
	Skjellum Research Fellowship	2022

TEACHING	EE 150: Introduction to Deep Learning (TA)	Winter 2025
	ACM 116: Introduction to Probability Models (TA)	Fall 2024
	CS 12: Machine Learning in Tensorflow (Instructor)	Spring 2024
	ACM 104: Applied Linear Algebra (TA)	Fall 2023
	CS 12: Machine Learning in Tensorflow (TA)	Spring 2023

| ACTIVITIES | Caltech Data Science Organization, President | 2021 - Present |
| | NCAA Cross Country and Track, Captain | 2021 - Present |