

Rohun Agrawal

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EDUCATION	California Institute of Technology B.S. Applied and Computational Mathematics Minor: Computer Science GPA: 4.1/4.3	2021 – 2025
RESEARCH EXPERIENCE	Caltech, Georgia Gkioxari Lab Advised by Prof. Georgia Gkioxari	January 2024 – Present
	<ul style="list-style-type: none">Developed an agentic program synthesis approach enhancing 3D spatial reasoning in AI, outperforming prior zero-shot models	
	NASA Jet Propulsion Lab, ML Group Machine Learning Research Intern	June 2023 – September 2023
	<ul style="list-style-type: none">Researched calibration of a Gaussian Process Regression model for Martian frost likelihoodReduced calibration error by over 6x for more reliable uncertainty estimates, improving confidence in 63% of scientific regions of interest	
	MIT, William Freeman Lab Advised by Mark Hamilton	January 2023 – June 2023
	<ul style="list-style-type: none">Developed and evaluated a novel feature distillation algorithm for features from Meta’s DINO model aimed at improving unsupervised semantic image segmentation	
	Caltech, Katie Bouman Lab Advised by Prof. Oscar Leong	January 2022 – June 2023
	<ul style="list-style-type: none">Developed an alternating minimization algorithm that samples from a denoiser to solve nonlinear inverse problems that arise in medical and astronomical imaging	
WORK EXPERIENCE	Apple, Media Analysis Team Machine Learning Intern	June 2024 – September 2024
	<ul style="list-style-type: none">Implemented and trained deep models from scratch for a video-related task with a focus on improving inference speed for similar output qualitySelected as 1 out of 10 interns to present to Craig Federighi, Senior VP and head of the Software Engineering Org	
PUBLICATIONS	Visual Agentic AI for Spatial Reasoning with a Dynamic API D. Marsilli, <u>R. Agrawal</u> , Y. Yue, G. Gkioxari. <i>Submitted to Conference on Computer Vision and Pattern Recognition (CVPR) 2025.</i>	
	Holistic Mapping of the Present-day Martian Seasonal CO2 Frost: Part 1 S. Diniega, G. Doran, S. Lu, M. Wronkiewicz, J. Widmer, <u>R. Agrawal</u> , U. Rebbapragada. <i>Submitted to Planetary Science Journal.</i>	
	Alternating Phase Langevin Sampling with Implicit Denoiser Priors for Phase Retrieval <u>R. Agrawal</u> , O. Leong. <i>International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2023.</i>	

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