

Athulith Paraselli

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Portfolio: <https://aparaselli.github.io/>

RESEARCH INTERESTS	Trustworthy Machine Learning, Mechanistic Interpretability, Multimodal Artificial Intelligence	
EDUCATION	Brown University , Providence, RI Master of Science, Computer Science - Artificial Intelligence/Machine Learning	Sep 2025 - May 2027
	University of California, San Diego (UCSD) , La Jolla, CA Bachelor of Science, Mathematics-Computer Science, <i>Data Science Minor</i>	Sep 2021- June 2025 cGPA: 3.82 / 4.00
RESEARCH EXPERIENCE	Graduate Research Assistant , Brown University <i>Advised by Dr. Ellie Pavlick</i> <ul style="list-style-type: none">Designed and conducted experiment to understand visual demographic biases within VLMs.Developed generalized pipeline for activation patching and logit lens within VLMs.Created steering vectors and applied them at inference to allow for training-free bias correction. Undergraduate Research Assistant , UCSD <i>Advised by Dr. Xi Li and Dr. Zhuowen Tu</i> <ul style="list-style-type: none">Developed novel multimodal adversarial training pipeline to improve robustness of VLMs by 12%.Integrated LoRA and prompt tuning in a unified training loop, enabling flexible defense strategies. Undergraduate Research Assistant , UCSD <i>Advised by Dr. George Sugihara</i> <ul style="list-style-type: none">Implemented a hybrid-LSTM model in PyTorch, achieving 70% accuracy in forecasting algal blooms.Fine-tuned Chronos, a foundation model for time-series forecasting, on ecological data to reduce weighted quantile loss (wQL) of algal bloom predictions by 32%.	Sep 2025 – Present Apr 2025 – Aug 2025 Nov 2024 – Nov 2025
TECHNICAL EXPERIENCE	Software Engineer Intern , Qualcomm Modem Integration Testing <ul style="list-style-type: none">Created an efficient unit testing workflow through optimizing existing industry-standard methods.Implemented functionality to automatically generate unit tests based on customer specifications.	Jun 2024 – Sep 2024
WORKING PAPERS	<i>When Visuals Alter the Verdict: Detecting Social Bias in Vision-Language Models</i> Athulith Paraselli , Tianze Hua, and Ellie Pavlick <i>Predicting Bioluminescent Algal Blooms Using "EDM-LSTMs"</i> Athulith Paraselli , Ciro Zhang, and George Sugihara	
TEACHING EXPERIENCE	Undergraduate Instructional Assistant <i>Conduct exam review sessions, design homework/exams, hold weekly office hours, grade assignments</i> Principles of Data Science , UCSD Advanced Machine Learning Methods , UCSD	Apr 2024 - Jun 2025 Apr 2025 - Jun 2025
TECHNICAL SKILLS	Programming Languages Python, C/C++, Java, Perl, ARM Assembly, MATLAB, SQL, HTML, CSS, JavaScript, Svelte Areas of Expertise Version Control(Git/Github), Machine Learning(Scikit-learn, Pytorch, Tensorflow, Keras, Hugging Face, NNSight), AWS(Amplify, API Gateway, Lambda, DynamoDB)	

SERVICES &
OUTREACH

Eta Kappa Nu (HKN) Projects Program	Nov 2024 – Jun 2025
<i>Inaugural Project Lead</i>	
<ul style="list-style-type: none">Led a team of 4 students to develop a live data processing pipeline and website to display Bioluminescent algal bloom forecasts.Established connections between Labs at Scripps Institution of Oceanography and Eta Kappa Nu.Coordinated community outreach initiatives, presenting accessible explanations of Harmful Algal Blooms and sharing updates from ongoing research collaborations.Presented results at San Diego Undergrad Tech Conference.	
Eta Kappa Nu (HKN) Events Team	Mar 2024 – Jun 2025
<i>Math-CS Events Chair</i>	
<ul style="list-style-type: none">Organized and led technical workshops on fundamental ML concepts such as neural networks and gradient descent, enhancing accessibility for underclassmen.Collaborated with board members to coordinate events, recruit inductees, and promote technical engagement across the department.	

AWARDS &
HONORS

<ul style="list-style-type: none">Eta Kappa Nu (IEEE HKN) Member, <i>UCSD</i>Provost Honors x11, <i>UCSD</i>	2023-2025
	2021-2025