

Camila Blank

📍 Los Angeles, CA ✉ camilab@stanford.edu ☎ (310) 321-8045 in camila-blank

Education

Stanford University

BS in Mathematics and Computer Science

- GPA: 3.9/4.0
- **Coursework:** Data Structures and Algorithms, Design and Analysis of Algorithms, Real Analysis, Finite Fields with Applications in Combinatorics, Proof-Based Probability Theory, Linear Algebra and Multivariable Calculus, AI for Theoretical Neuroscience, Data Narratives

Experience

Machine Learning and Computational Neuroscience Researcher

Stanford, CA

The Linderman Lab at Stanford University

Jun 2025 - Present

- Led project developing reinforcement learning algorithm to model intrinsic rewards in complex animal decision-making
- Awarded 2025 SURP-Stats fellowship, mentored by Scott Linderman and Aditi Jha

Problem Writer

Stanford, CA

Stanford Math Tournament

Sep 2024 - Present

- Conceptualizing and designing math problems for one of the largest university-run math contests globally
- Specializing in applying concepts from combinatorics and number theory

Neuroscience Researcher

Stanford, CA

The Gibson Lab at Stanford University School of Medicine

Jan 2025 - Jun 2025

- Used linear discriminant analysis and a hidden Markov model to analyze electroencephalogram (EEG) sleep recording data
- Project investigated the role of myelination and circadian rhythms in Alzheimer's Disease

Composer Fellow

Los Angeles, CA

Los Angeles Philharmonic

Oct 2023 - Jun 2024

- Composed 3 original works performed and recorded by the LA Phil, LA Master Chorale, and other ensembles
- Collaborated with world-renowned composers across several stages of project

Machine Learning Projects

Exploring Dynamic Profiles of User Emotions in LLMs

[Blog](#) 

- Extracted hidden states from Llama-3.1-8B-Instruct and trained linear logistic probes
- Found emotion classification accuracy was >3.5x chance, updated promptly across conversations
- Steered responses using control-probe vectors, confirmed with LLM judge

Reinforcement Learning Models of Animal Curiosity

[Poster](#) 

- Modeled mice learning to navigate 127-node binary tree maze
- Built Q-learning variants to model reward parameterizations and evolving world models in mice
- Custom algorithm using KL-divergence-based reward outperformed vanilla Q-learning in log-likelihood

Skills

Languages: Spanish (Native or bilingual proficiency), Mandarin Chinese (Professional working proficiency)

Technical: Python (Pytorch, Gymnasium, NumPy, Pandas, Matplotlib), C++, R, LaTeX, Wolfram Mathematica, Somnotate, data visualization

Laboratory skills: Immunohistochemistry, electroencephalogram (EEG) sleep analysis