Camila Blank

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Education

Stanford University, *BS in Mathematics and Computer Science,* GPA: 3.9/4.0.

- Courses: NLP w/ Deep Learning, Algorithms, Real Analysis, Linear Algebra, Abstract Algebra, Probability, Explainable AI, Sociolinguistics, etc.

Experience

Brain Foundation Model Researcher *Stanford, CA*
Stanford Artificial Intelligence Laboratory *Sept 2025 - Present*

- Building an explainable, end-to-end foundation model for diffusion MRI
- Analyzed UMAP embeddings to discover that model's latent space encodes clinically meaningful structure
- Mentored by Ehsan Adeli in STAI/SVL Lab, co-authored paper under review for CVPR 2026.

ML and Computational Neuroscience Researcher *Stanford, CA*
The Linderman Lab at Stanford University *Jun 2025 - Present*

- Led project developing reinforcement learning algorithms 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*

- Writing combinatorics problems for one of the largest university-run math contests globally

Neuroscience Researcher *Stanford, CA*
The Gibson Lab at Stanford University School of Medicine *Jan 2025 – Jun 2025*

- Applied machine learning algorithms to analyze 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

Machine Learning Projects

Model Organisms Of Unfaithful Chain-of-Thought *Blog*

- Developed method using Synthetic Document-Fine-Tuning to create a model organism of unfaithful CoT
- Discovered linear direction that can be steered/ablated to enhance or suppress unfaithfulness

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 proficiency), Mandarin Chinese (Professional working proficiency)

Technical: Python (Pytorch, Gymnasium, NumPy, Pandas, Matplotlib), C++, R, LaTeX