Lucas Tellez

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Education

Stanford University Class of 2026 — **Stanford, CA**
Undergraduate Student — *September 2022–Present*

- Pursuing Bachelor of Science with Honors degree in Mathematics, Minor in Computer Science
- ASES Summit team leader: Managed an entrepreneurship conference for 30 international entrepreneurs featuring successful startups in 2023 and in 2024.
- Relevant skills: Python, NumPy, Pandas, SciPy, Sklearn, Tensorflow, PyTorch, R, C++, Excel, Julia
- Relevant classes: Graph Theory (Menger's theorem, minimax flows, extremal graph theory, Ramsey theory, etc), Programming Abstractions (data structures), Probability Theory, Modern Mathematics: Continuous Methods (Real Analysis, Multivariable Calculus, Linear Algebra, Tensor Algebra and Differential Forms on Manifolds, Autonomous Differential Equations, Sturm-Liouville theory, and Dynamical Systems), Decision Making Under Uncertainty (Reinforcement learning, Bayesian inference, State Uncertainty, etc.), Abstract Algebra, Advanced Analysis, Topology and Geometry, Machine Learning (GLM's, deep learning, EM, nonparametrics), Differential Topology, Measure Theory and Fourier Analysis, Modules and Group Representations, Optimization (linear programming, smooth methods, line search, black-box, surrogate, multi-objective)
- GPA: 3.8

Relevant Experience

Research/Personal Projects — **Stanford, CA**
Stanford Affiliated: CS 238 and CS 229 — *November 2023–Present*

- CS 238: Using Python to create two reinforcement learning based systems to trade SPY options: One using dynamic state-space modeling, and the other using the actor-critic paradigm with gated recurrent units.
- CS 229: Using Python to predict passenger airfare and optimize purchasing time from a customer perspective. Achieved gold medal scores in Kaggle competition.

Stanford Undergraduate Research in Mathematics (SURIM) — **Stanford, CA**
Researcher — *June 2024–August 2024*

- Studying the Optimal Transport Problem and its novel applications to other areas of mathematics (research). Areas include computing Wasserstein distances, etc.

ZeroPlus Derivatives — **Chicago, IL**
Machine Learning Engineer — *December 2023–Present*

- Continuing the CS 238 project by creating PPO and Actor-Critic variants, and optimizing the Python code with the CUDA library. Optimizing hyperparameters with surrogate optimization methods.

Genpact — **New York, NY**
Data Science Intern — *June 2023–September 2023*

- Worked on applications of modern AI and ML, specifically fusing LLM contextualization with Bayesian Structural Time Series for modeling in R, and data preparation in Python (Pandas), focusing on finding proper priors and streamlining the modeling process.