

Eugene Francisco

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EDUCATION

Stanford University

Bachelor of Science, Mathematics; GPA: 4.035

Palo Alto, CA

Expected Graduation: June 2027

School for Advanced Studies

Associate's in Arts earned while dual enrolled in high school

Miami, FL

August 2021 – June 2023

EXPERIENCE

SpaceX

Incoming Software Intern

- Software intern on the avionics team of the Falcon 9.

June 2025

Undergraduate Teaching Assistant

Stanford University

- Teach concepts and algorithms from the Python and C++ sequence of Stanford courses in a weekly section.
- Tutor one-on-one with Stanford CS students for help with class algorithms and assignments.

September 2024 - Present

Software Intern

Fairchild Botanic Garden

- Led team that trained and implemented object detection ML model (YOLO V4) to detect leaves in photos of plants for use in botanical research. Achieved 90% bounding box accuracy.

July 2022 – August 2022

Miami, FL

Stanford Math Tournament

Problem Writer

- Write combinatorics and probability problems for the Stanford Math Tournament.

September 2024 - Present

Stanford, CA

Beekeeper

Old Mill Apiaries, Private Farm

- Managed hives, extracted honey, and helped with distribution at a private apiary in southern Scotland.

July 2024 – September 2024

Dumfries, Scotland

PROJECTS

Deep Q Learning for Option Pricing

- For CME 241 @ Stanford, I used deep Q learning to learn fair option prices by treating option pricing as an MDP problem. Project writeup [here](#).

March 2025

Visualizing the Itô Correction

- Wrote [this](#) to visualize how quadratic variation of SDEs with Brownian Motion gives rise to the Itô correction.

September 2024

Finding Generators in Finite Fields

- Wrote [this](#) calculator to help find orders of different polynomials in finite fields of size p^2 .

July 2024

RELEVANT COURSEWORK

Spectral Graph Theory | *Stanford Directed Reading Program*

- Quarter long reading program on spectral graph theory, expanders, psuedo-randomness, and tournament constructions. Advised by Maya Sankar.

Probability (Proof Based) | *Math 63DM, A*

- Markov processes; Central Limit Theorem; Maximum Entropy Principle; Uniqueness of Entropy Function.

Matrix Theory | *Math 113, A+*

- Spectral theorems; operators and minimal polynomials; matrix representations.

Machine Learning | *CS 229, A*

- Linear regression, classification, deep learning, backprop, and decision trees.

Reinforcement Learning for Stochastic Finance | *CME 241, A+*

- RL through the lens of finance; MDPs and different Q learning algorithms.