

Eugenio D. Macias

eugenio_macias_orozco@brown.edu | +1 (401) 346 3616 | Providence, RI | <https://www.linkedin.com/in/eugenio-macias/>

EDUCATION

Brown University,

Aug. 2022 – May 2026

MS Applied Mathematics (*Concurrent*) , BS Mathematics—Computer Science

Providence, RI

- **GPA:** 4.0
- **Relevant Coursework:** Probability Theory, Real Analysis, Complex Analysis, **PDE's, AI, ML**, Investments II, Mathematical Econometrics, Quantum Mechanics, Algorithmic Game Theory
- **Clubs:** Quant Trading at Brown, Forecasting Club, Chess Club

United World College (\$40,000/year scholarship), **IB:** 42/45

Bosnia & Herzegovina | 2020 – 2022

EXPERIENCE

Citi, Quantitative Analyst Intern (*incoming*)

New York City | Jun. 2025 – Aug. 2025

- Selected for a competitive internship program focused on developing quantitative strategies in financial markets.

DE Shaw & Co, Fellowship

New York City | Apr. 2024 – May 2024

- Collaborated in in-depth discussions on quantative trading exploring statistical and machine learning techniques
- Explored innovative projects in software development for financial applications, emphasizing high-frequency trading systems
- Analyzed the integration of probabilistic models and ML frameworks to improve trading decision-making processes.

Bridgewater Associates, Investment Immersion Program

Westport, CT | Feb. 2024 – Mar. 2024

- Engaged in case studies and workshops led by senior researchers, exploring financial models and investment strategies.
- Learned about alpha and beta engines, as well as **ML** algorithms for financial modelling and automatized investments

Point 72 & Correlation One, Data Scholar

Remote | Apr. 2024

- Conducted data science case studies to forecast airline revenue using Python libraries like Pandas and Matplotlib
- Intensive training program focused on leveraging data science, alternative data sources, and AI/ML within hedgefund industry

Buddywise, Founder's Associate Intern

Berlin, Germany | May 2023 – Jul. 2023

- Streamlined dataset integration for ML and computer vision pipelines, reducing processing time by 30%.
- Secured \$50,000 in Mixpanel credits to analyze UI metrics, boosting KPI visibility by 40%.

PROJECTS

Research: *Fourier Analysis and Laplace's Equation*

- Wrote a 50-page research paper in Real Analysis and Linear Algebra: complex-real function theory, convergence criteria
- Explored the importance of Fourier Series to Laplace's 2-D Equation solution space with 4 Boundary Dirichlet conditions

Personal Portfolio: (*HTML, CSS, JavaScript, GitHub Pages*)

- Designed and developed a personal portfolio website using **HTML**, **CSS** for styling, and **JavaScript** for special effects.
- Deployed the site using GitHub Pages for continuous updates and accessibility across devices.

Go Hybrid Agent: (*PyTorch, NumPy, OpenSpiel*)

- Built an AI agent for Go using neural networks for policy-value estimation, integrated with Alpha-Beta and Monte Carlo Tree Search.
- Achieved a 60% win rate against baseline models and validated performance through cross-validation.

Blackjack ReinforcedAI: (*Python, NumPy, Gymnasium*)

- Developed an AI for Blackjack using Markov Decision Processes (MDPs) based on player totals, visible cards, usable aces.
- Implemented **Value-Iteration** for policy optimization (43% win rate), **Q-Learning** off-policy exploration (41% win rate).
- Conducted **Monte Carlo simulations** across (100,000 episodes) to evaluate policy performance and refine state-action transitions

AWARDS

- **Citadel Invitational Terminal 2024:** Selected for a competitive trading hackathon by Citadel & Citadel Securities.
- **PUTNAM 2023:** Top 20% scorer in the leading university-level mathematics competition.
- **IYMC:** **Silver Medalist** in the mathematics open category 18+
- **STEM Olympiad:** **1st place** in Math-Geo-Tech (National, BiH); **13th** globally out of 4,000+ participants.
- **Shelby Davis Scholar:** **Full scholarship** award for undergraduate studies at Brown University
- **SBFS 2023 :** Exploration award to learn from financial professionals working in NYC
- **GSSA 2024:** Exploration award in Berlin and Leipzig to study cultural dynamics of East & West Berlin

SKILLS & INTERESTS

Skills: Python, Java, C++, TensorFlow, **PyTorch**, **NumPy**, **Pandas**, **Scikit-learn**, Docker, GitHub, STATA

Languages: **Spanish** (Native), **English** (Fluent), German (B1), French (B1).

Interests: Competitive Chess (**2000+ ELO**), Mathematical Topics, Classical Guitar (**National 2nd Place**), World Travel (+30 countries)