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
Applied Mathematics—Computer Science (*BS*), Mathematics (*BS*) *Providence, RI*
- **GPA:** 4.0
- **Relevant Coursework**: Multivariable Calculus, Linear Algebra (**honors**), Probability (**honors**), Statistical Inference, Mathematical Econometrics, Ordinary Differential Equations, Partial Differential Equations, Algebraic Topology, Abstract Algebra, Real Analysis (**graduate**), Complex Analysis, Functional Programming, Data Structures, Design & Analysis of Algorithms, Computer Systems, **AI**
- **Clubs**: Quant Trading at Brown, LATAM Society, SHPE, Brown Chess Club, Applied Music Program

United World College ($40,000/year scholarship), **IB:** 42/25 *Bosnia & Herzegovina* | 2020 – 2022

EXPERIENCE

Scale AI, Incoming Software Engineer *Remote* | Sep. 2024 – Dec. 2024
- Evaluate AI-generated code, develop robust test-cases, and develop new platforms for AI functionalities

D. E. Shaw & Co., Fellowship *New York City, NY* | Apr. 2024 – May 2024
- Engaged 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

Bridgewater Associates, Investment Immersion Program *Westport, CT* | Feb. 2024 – Mar. 2024
- Participated in markets sessions, and case-studies led by senior investment associates, engineers, and quantitative researchers
- 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
- Participated in data-science case studies using **Pandas**, **Matplotlib** to model future revenue of different airlines
- 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
- Oversaw researching and implementing datasets into the data pipeline for the ML, Computer Vision and AI algorithmss
- Secured a $50,000 Mixpanel credits award to conduct comprehensive analysis of Buddywise UI metrics and KPI's

PROJECTS

Research: *Fourier Analysis and Laplace's Equation*
- Authored 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

Time-Series Forecasting (*Python, R*) (ongoing)
- Implemented a time series predictor algorithm in Python utilizing Bollinger-bands and Monte-Carlo Simulations.
- Utilized changepoint detection, multiple linear regressions, **ARIMA** models, and **Matplotlib-Seaborn** for visualizations
- Employed the Etrade API for real-time data and parsed index pricing and variance statistics using XML Etree Libraries

Personal Portfolio (*HTML, CSS, JavaScript, GitHub Pages*)
- Designed and developed a personal portfolio website using **HTML**, **CSS** for styling, and **JavaScript** for special effecrs.
- Hosted the website on **GitHub** Pages for continuous deployment and accesibility to different devises

Graph-Optimizer Algorithm (*Python*)
- Created a graph algorithm that optimizes edge-paths based on cost, distance, time- efficiency, and customizable parameters
- Employed graph structure algorithms like Dijkstra, BFS, and DFS. Tested with graphs with 500+ vertices and edges

Game-AI (*ReasonML*)
- Implemented a Connect-4-game calculator and module for MxN-board dimensions using matrix representations
- Assigned numerical values to a Mini-Max Algorithm allowing the AI to outperform 100% of human moves

AWARDS

- **PUTNAM** 2023: Represented Brown in leading university-level mathematics competition (**top 20% scorer**)
- **IYMC**: Obtained the **Silver Medal** in the mathematics open category 18+ (2022).   **Special Honour** (2021)
- **STEM Olympiad** 2022: **1ˢᵗ place** in the Math-Geo-Tech National Exam (BiH)
- **STEM Olympiad** 2022: **13ᵗʰ place** in the Global Ranking (4000+ students)
- **Shelby Davis Scholar**: **Full scholarship** award for undergraduate studies at Brown University
- **SBFS 2023** (Brown): Exploration award to learn from (VC, IB, PE) financial analysts working in NYC
- **GFA**: Secured **2ⁿᵈ & 3ʳᵈ place** in the National Classical Guitar Competition in Mexico. GFA in USA

SKILLS & INTERESTS

Skills: Proficient in Excel, PowerPoint, Word. **Spanish** (native), **English** (bilingual), **German** (B1), **French** (B1)
Programming Tools: **Python, Java, C, C++, R**, LaTex, STATA, ReasonML, Racket, Docker, GitHub, VS Code
Specializations: Applied Data Science (Python) (IBM), Capital-Options (Akuna Capital)
Interests: Chess (1940 ELO), Classical Guitar, Travelling the World (trying all food).