EVARISTO VILLASECO

evaristo.va@outlook.com| +1 (929) 385-8568 | Jersey City, NJ | LinkedIn | Github | Google Scholar

EDUCATION

Rutgers University | August 2020–January 2025 *P.hD. in Physics (GPA 4.0).*
Rutgers University | August 2020–January 2022 *M.Sc. in Physics (GPA 4.0)*
Autonomous University of Madrid | September 2016–July 2018 *M.Sc. in Theoretical Chemistry and Computational Modeling (1 Class Honor).*
University of Salamanca | September 2012–May 2016 *B.Sc. in Chemistry (8 Class Honors).*

SKILLS & CERTIFICATIONS

- **Languages & Platforms**: Python, Bash, Fortran, SQL, Git, Familiar with GitHub Actions, CI/CD, HPC cluster.
- **Quantitative Skills:** Probability, Statistical inference, A/B testing, Linear algebra, Numerical methods, Optimization techniques.
- **Machine Learning**: PyTorch, Scikit-learn, Statsmodels, XGBoost, Hugging Face, Transformers.
- **Soft Skills:** Problem-solving, Critical-thinking, Communication, Cross-disciplinary collaboration.
- **Certificates**: ColumbiaX Professional Certificate in Corporate Finance [LINK], The Erdős Institute Data Science Boot Camp [LINK], The Erdős Institute Deep Learning Boot Camp [LINK].

EXPERIENCE

Rutgers University | *Research Assistant* | September 2020–Present

- Developed novel theory and computational schemes to simulate complex molecular behavior, outperforming widely used existing methods in describing key molecular observables [LINK].
- Analyzed and extracted insights from high-dimensional molecular trajectory data per calculation, involving up to 1,000 time steps, 27 degrees of freedom, and 25 electronic states per system, to drive theoretical advancements.
- Contributed as a developer to open source Fortran codes: g-ctmqc [LINK] and QuantumModelLib [LINK].
- Published 10 papers in high-impact peer-reviewed journals and presented findings at international conferences.

Rutgers University |*Teaching Assistant* | September 2020–January 2022

- Led interactive problem-solving sessions for over 100 students across 3 semesters.
- Developed comprehensive teaching materials, graded assessments and provide individualized support during office hours.

SELECTED PROJECTS

GenAI-powered solutions for the restaurant industry *Burnt & The Erdős Institute* | May 2024–August 2024

- Collaborated with Burnt to design and implement AI-solutions to address key challenges in restaurant operations.
- Fine-tuned cutting-edge large language models (LLaMA 2, BERT, GPT-2) to standardize product categorization across suppliers, achieving ~92.5% classification accuracy. [LINK]
- Leveraged efficient fine-tuning techniques, including LoRA, to enhance performance while reducing computational costs.
- Developed a machine learning model to forecast restaurant sales and menu item demand leveraging key external and operational factors, to drive more informed decision-making, optimize inventor and reduce food waste.[LINK]
- Ranked in the top 10 out of 70+ projects in the bootcamp, earning distinction for innovation and impact.

LaLiga SoccerSage | Jan 2025–March 2025

- Developed and implemented a Random Forest model to predict outcomes of La Liga soccer matches achieving accuracy rate of 75%
- Engineered features from historical match data, including team performance metrics and situational factors to enhance predictions.
- Outperformed random guessing by 127% and bookmaker implied probabilities by 24%.

AWARDS

- **Chateaubriand Fellowship:** Awarded a prestigious fellowship by the Embassy of France on the United States to lead a joint research project between Université Paris-Saclay and Rutgers University that resulted in 5 peer-reviewed publications.
- **Dean Dissertation Fellowship:** Awarded for outstanding research contributions in applied physics.
- **ICIQ Summer Fellowship**: Top 1.4% among 1,000+ applicants for a prestigious research program in one of Spain's leading chemical institutions.
- **IFIMAC Grant:** Awarded a full-tuition M.Sc. scholarship and living stipend by the Institute of Condensed Matter Physics.