EVARISTO VILLASECO

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EDUCATION

P.hD. in Physics, *Rutgers University* | 2020–2025 | GPA 4.0.
M.Sc. in Physics, *Rutgers University* | 2020-2022 | GPA 4.0.
M.Sc. in Theoretical Chemistry and Computational Modeling, *Autonomous University of Madrid* | 2016-2018 | 1 Class Honor.
B.Sc. in Chemistry, *University of Salamanca* | 2012–2016 | 8 Class Honors.

SKILLS & CERTIFICATIONS

Languages & Platforms: Python, SQL, Linux, Bash, Fortran, Git, HPC cluster.
Quantitative Skills: Probability, Statistical inference, 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

Data Scientist (Intern) | *Burnt* | February 2025–Present

- Developed an ERP Matching Assistant Chatbot powered by GenAI in Python to automate order data collection for sales representatives, ensuring data validation and integration with external tools for database checks.
- Enabled real-time interaction via WhatsApp using Twilio and Flask improving order verification and customer communication.

Open Source Contributor | *g-ctmqc & QuantumModelLib* | September 2022–Present

- Implemented a new molecular dynamics method in g-ctmqc [LINK] and extended the codebase with additional functionalities, expanding its simulations capabilities by 25%, and supporting 4 peer-reviewed publications.
- Integrated two new quantum models into QuantumModelLib [LINK] increasing the library's electronic structure capabilities by 5%.

Computational Physics PhD | Researcher | *Rutgers University* | September 2020–Present

- Developed new methods to simulate complex molecular interactions that led to a 80 % reduction in energy deviation and an 87% improvement in molecular property predictions compared to existing standard approaches [LINK].
- Engineered an exact mathematical framework to guide the development of efficient and accurate next-generation methods for molecular dynamics simulations.
- Published 10 papers in high-impact peer-reviewed journals and presented findings at international conferences.

Computational Physics PhD | Graduate Student Instructor | *Rutgers University* | September 2020–January 2022

- Led problem-solving sessions for 100+ students, developed materials, graded assessments and provided office hour support.

SELECTED PROJECTS

Restaurant Analytics & Demand Forecasting | *Burnt & The Erdős Institute* | May 2024–August 2024

- Uncovered key trends in restaurant sales and consumer behavior analyzing sales fluctuations across various conditions and time periods.
- Developed a forecasting model for restaurant sales and menu item demand, leveraging key external and operational factors, with a projected 15% annual savings (~$250k) on food costs if adopted by the restaurant.[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 bookmaker implied probabilities by 24%.

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

- Fine-tuned open-source LLMs (LLaMA 2, BERT, GPT-2) using efficient techniques such as LoRA to standardize product categorization across restaurant suppliers, achieving ~92.5% classification accuracy. [LINK]