

Álvaro Martín Ruiz

alvarorz.martin@gmail.com | +34 644 96 07 28 | Madrid, Spain | [LinkedIn](#) | [GitHub](#)

EDUCATION

Universidad Carlos III de Madrid (UC3M) **Madrid, Spain**

Dual Bachelor in Data Science and Telecommunication Technologies Engineering *Sep 2021 – Jun 2026*

- Taught fully in English.
- Completed the degree one year ahead of schedule.
- Class Representative (2023–2024)
- Coursework: Machine Learning, Optimization, Neural Networks, Stochastic Processes.

Universidad Carlos III de Madrid (UC3M) **Madrid, Spain**

Minor in Finance (12 ECTS) *Feb 2023 – Jun 2025*

- Coursework focused on Financial Derivatives: Options, Futures, Swaps, Binomial Trees, Greeks.

PROFESSIONAL EXPERIENCE

Universidad Carlos III de Madrid (UC3M) **Madrid, Spain**

Scientific and Technical Staff *Sep 2025 – Present*

- Assessed the clinical efficacy of Machine Learning models for the Smartercrisis 2.0 project, targeting suicide prevention in high-risk cohorts.
- Optimized behavioral profiling using **Gaussian Mixture Models (GMM)** and validated **Bayesian Online Change Point Detection (BOCPD)** to identify critical anomalies.

Santander Corporate & Investment Banking (CIB) **Madrid, Spain**

Securities Finance Trading Team - Summer Intern *Jun 2025 – Aug 2025*

- Developed automated solutions using Excel VBA and interactive dashboards, saving the trading desk **30+ minutes** of manual work daily.
- **Automated** trade reporting and **PnL calculations** for **TRS, Repo, and SSA bond** positions, covering benchmark rates like **ESTR, SOFR, and SONIA**.
- Gained hands-on exposure to securities financing, collateral management, and repo market operations.

NTT Data **Santander, Spain**

Software Development - Intern *Jun 2024 – Oct 2024*

- Developed Python software to automate and digitize the client's Hedge Accounting process, utilizing GitHub for collaborative development.

LEADERSHIP & ACTIVITIES

Business Analytics Association UC3M **Madrid, Spain**

- Created educational content for the association's social media platforms. *Sep 2024 – Aug 2025*

Buddy Programme UC3M **Madrid, Spain**

- Guided first-year students during their academic adaptation process. *Sep 2022 – Jun 2024*

ADDITIONAL INFORMATION

- **Technical Skills:** Python, Java, C, R, SQL, Machine Learning, Predictive Modeling, Data Visualization, GitHub
- **Languages:** Spanish (Native), English (Fluent, C1 Advanced).
- **Projects:** Autonomous Pacman using Reinforcement Learning; Predicting Heart Disease using Machine Learning techniques; Delta Hedging (implemented a strategy to replicate the MSCI World Index through option deltas).