Alejandro García Gómez

Mathematics graduate with solid training in programming, data analysis and optimization. Interested in applying mathematical knowledge to real-world problems and continuing to develop skills in algorithms, modelling and artificial intelligence tools.

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EDUCATION

Dual Baccalaureate (Academica International Studies)

Colegio San Viator | 2020 – 2022 | Madrid

- Dual programme combining the Spanish Baccalaureate with the American High School Diploma.
- Academic coursework fully developed in English using digital learning platforms.
- Development of autonomy, time management skills and full linguistic immersion through subjects taught in English (such as U.S. History, Government and Economics).

Bachelor's Degree in Mathematics

Universidad Rey Juan Carlos | 2022 – 2026 | Madrid

- Current GPA: 7.44 / 10
- **Programming and Numerical Analysis:** Design and implementation of algorithms using Python, Java, R and MATLAB.
- **Optimization and Network Analysis:** Study and application of Linear and Nonlinear Optimization models. Use of Graph Theory for modelling and analysing flows and routing problems in networks.
- **Data Mining:** Introduction to Data Science techniques, including classification and clustering algorithms, as well as tools for data cleaning and preprocessing of large datasets.

EXPERIENCE

Mathematics Tutor (Private)

2023 – 2025

- Academic support for high school and early undergraduate students.
- Explanation of mathematical concepts and guided problem-solving.
- Adaptation of teaching methods and content to each student's level.

Relevant Academic Projects

- **Predictive Analysis of Student Dropout:** Application of Data Mining techniques and Exploratory Data Analysis in R using the dataset *Predict Students' Dropout and Academic Success*. Use of dimensionality reduction methods, clustering algorithms and supervised and unsupervised learning models to identify patterns and risk factors associated with academic dropout.
- **Optimization Algorithms Implementation:** Development and implementation of numerical methods and Linear and Nonlinear Optimization algorithms to solve real-world optimization problems in an academic context. (Tools: MATLAB, Java).
- **Network Modelling and Analysis:** Application of Graph Theory to model complex networks, focusing on shortest-path algorithms, connectivity analysis and optimal routing using algorithms such as Dijkstra and Floyd–Warshall.

SKILLS

TECHNICAL

- Python, Java, R, MATLAB.
- LaTeX, SQL.
- Data analysis, statistics, optimization and numerical methods.
- Mathematical modelling and algorithm development.

SOFT SKILLS

- Analytical thinking and problem-solving.
- Organisation and time management.
- Self-directed learning.
- Effective communication.

LANGUAGES

Spanish
Native

English
C2 – Cambridge Proficiency

German
B2 – TELC

INTERESTS

- Mathematical modelling and quantitative analysis.
- Programming, data analysis and AI tools.
- Application of mathematical methods to real-world problems.