

ALEX MARTORELL LO CASCIO

+34 686865709 alexmartorell1@hotmail.com Alex Martorell amartorell98 Portfolio

Presentation

Mathematician and Data Scientist aspiring to find a job where I can apply my sharp analytical and mathematical skills to serve the company's data driven needs.

Citizenship

USA and Spanish

Education

Polytechnic University of Catalonia, Barcelona

September 2021 – June 2023

MSc in Data Science

Thesis: (Honors) On the composition of neural and kernel layers for machine learning

University of Barcelona

September 2016 – June 2021

BSc in Mathematics

Thesis: Modelling volatility using ARCH and GARCH Processes (Time Series Forecasting)

Languages

Native speaker of English, Catalan and Spanish. Intermediate level of Italian and French.

Experience

Transports Metropolitans de Barcelona (TMB)

October 2022 – July 2023

Data Science Intern

Barcelona, Spain

Transports Metropolitans de Barcelona is the metropolitan transportation authority in the city of Barcelona. It has 8000+ employees and serves over 2 million commuters daily.

- **Responsibilities.**

- * Leveraged R and Python, alongside cutting-edge libraries and packages, to perform statistical analysis and develop machine learning models; optimized pricing strategy, resulting in a 20% increase in overall revenue.
- * Extracted and analyzed data from diverse database sources using SQL, enabling data-driven decision making; identified cost-saving opportunities resulting in a 15% reduction in operational expenses.

- **Projects I participated in:** (1) The development of a **predictive model** to detect and prevent future mechanical issues based on **real-time data** collected by the integrated systems on the bus, (2) Fare evasion tracking and statistical analysis, (3) The study of overcrowded buses and building **dashboards** reflecting historical and real time data.

Camp Killoqua

July 2021 – September 2021

Camp Counselor

Stanwood, WA (USA)

- **Responsibilities:** To organize activities for day and overnight campers (ages 5-16), as well interacting with parents, preparing meals, and making sure that all campers were safe and felt included.

Institució Cultural del CIC

2017 – 2021

High School Math Teacher

Barcelona, Spain

- Teacher of a group of 15 students, with the goal to prepare them for Mathematical Kangaroo, an international math competition held in +90 countries

Other experience

Self-employed

2016 – 2023

Private tutoring

Barcelona, Spain

- High-school math (grades 9 thru 12), undergraduate calculus, linear algebra, probability and statistics.

University of Barcelona

2018 – 2021

Student representative

Barcelona, Spain

- Council of Mathematical Studies in the University of Barcelona
- Math and Computer Science Faculty.

Technical Skills

Programming: C, Python, R, SQL, Matlab, AMPL, Cypher, DAX

ML Frameworks: PyTorch, Tensorflow, Pyspark

Software & Tools: Github, PowerBI, Tableau, Excel, Pentaho, Neo4j

Big Data Technologies: AWS, Spark, MLOps