

Education

- **Master of Research in Management Science** **Barcelona**
ESADE - Universitat Ramon Llull *present*
This program provides participants with a strong foundation in organizational theories and research methodologies. It is designed as a first step toward pursuing a career in research in business schools, universities, or international organizations. The program prepares students to pursue doctoral studies.
- **Master of Science in Stochastics and Financial Mathematics** **Amsterdam**
Vrije Universiteit Amsterdam *2016*
I was focused on Measure Theoretic Probability, Stochastic Processes, and Optimization, Statistics for High Dimensional Data, Data Mining Techniques, Computational Finance, Simulation Methods in Statistics, Complex Systems Simulation.
- **Bachelor of Science in Mathematics (not completed)** **Barcelona**
Polytechnic University of Catalonia *2013*
I studied one extra year of mathematics to expand my knowledge on Ordinary Differential Equations, Dynamical Systems, Real Analysis, Statistics, and Probability.
- **Bachelor of Science in Physics** **Barcelona**
University of Barcelona *2012*
I specialized in Advanced Analytical Mechanics, Statistical Physics, Vectorial Algebra, Geophysics, Meteorology, Geodesics, Astronomy, Semiconductors theory, and Photonics.

Relevant Work Experience

- **ESADE - Universitat Ramon Llull** **Barcelona**
Teaching Assistant *May 2021–July 2021*
Teaching activities in 'Big Data in Finance' for the M.Sc. in Finance. This course consists of 5 sessions that cover an Introduction to Python Basics, Machine Learning Techniques, Application to Risk Management, Graph Theory and Financial Networks, and Numerical Asset Pricing.
- **ESADE - Universitat Ramon Llull** **Barcelona**
Research Assistant *April 2020–July 2021*
Research activities within the lab related with complex networks and financial network analysis. Coding in Python for modeling financial distress propagation on customer-supplier networks to assess the economic health of the whole structure. Application of a theoretical study of the model to a real customer-supplier network, in collaboration with Universitat Rovira i Virgili and IFISC.
- **hkp/// RemuNet** **Amsterdam**
Senior Analyst *March 2019–March 2020*
Industry evaluation: I assessed and advised over 30 global clients of Oil and Gas, Energy industries, Dutch Law Firms and international Airlines, focusing on human capital management practices, growth strategies, and economic trends, anchored by data analysis.
Data Analytics: I compiled, analyzed, and benchmarked human capital, pay- and private productivity information on more than 700,000 staff in over 60 countries, especially airlines, creating customized reports using SQL.
Data Visualization: I developed dashboards and data visualization formats on Microsoft Excel, PowerPoint, and Power BI, allowing clear data communication and highlighting the most relevant conclusions for clients.

- **hkp/// RemuNet**
Analyst

Amsterdam
July 2016–February 2019

Data Mining: I designed input sheets and validated Excel databases with over 150.000 rows and 50 columns, securing high-quality data for further benchmark and interpretation.

Programming and Tool development: I developed advanced codes in R to run Monte Carlo simulations for the valuation of Long-Term Incentives of the Board Members and the Top Executives of DAX companies, based on company plan documents. Created and automatized Excel tools to extract data from online and internal sources, facilitate other analysts validating data sets, and publish individualized reports.

Publications and Appearances

- “On the convergence of financial distress propagation on generic networks”, *23rd International Conference of the Catalan Association for Artificial Intelligence*, October 2021.
- “Modeling financial distress propagation on customer–supplier networks”, *Chaos: An Interdisciplinary Journal of Nonlinear Science*, Volume 31, Issue 5 (2021).

Notable Projects

- **Master Thesis:** *‘Modelling the Household Life Cycle in the Netherlands’*

I developed a NetLogo model to find the critical social determinants that impact the behavior of households in The Netherlands. This agent-based model meets different requirements, such as producing realistic household dynamics and composition patterns while being flexible enough to capture different demographic scenarios. Data was provided by CentERdata Instituut voor Dataverzameling en Onderzoek.

- **Individual project:** *‘Electoral behavior in Spanish municipalities’*

I gathered the public databases of the municipal election results in Spain since 1979 to aggregate them to observe the impact of local parties in national politics. I analyzed the transfer of vote between parties and national and ideological ascription of local and social movements.

- **Individual project:** *‘Water mines in Catalonia. How to use water resources in a granitic batholith.’*

I made a catalog of old and unused water infrastructures (water mines) to reuse them as an alternative water resource to the rivers and desalination. I found a connection, confirmed by data analysis, between the geological birth of the mine and its water flow. This project was awarded a second prize in the 20th Contest of Young Researchers in Spain, by the Ministry of Education and Science.

- **Individual project:** *‘Saint Roch’s cult. A historical approach to the effects of the Black Plague.’*

I supported, with data analysis, historical research about the cult of Saint Roch in Catalonia as a result of the Black Plague. I analyzed the data from baptism and burial books of parish churches in the 16th and 17th centuries (20,000 data points). The Government of Catalonia granted this project.

Technical and Personal skills

- **Languages:** Spanish and Catalan (native), English (fluent), Italian (fluent), Dutch (B1), French (basic).
- **Programming Languages:** R, Python, SQL, VBA, Fortran77, TeX. Ability with C++.
- **Other Skills:** Most MS Office products (Excel expert), Power BI, Photoshop, Quark X Press (magazine publisher). Notions of Macromedia animation (Dreamweaver and Flash). Driving license.