

MARC BATAILLOU ALMAGRO

Senior Applied Scientist

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WORK EXPERIENCE

Amazon

Barcelona / Paris

Senior Applied Scientist

Aug 2023 – Present

- Applied advanced modeling, simulation, and optimization to reshape world-wide operations.
- Proposed novel meta-heuristic and decomposition techniques for scheduling and network design problems with billions of variables while leading initiatives involving 50+ scientists, software developers, and project managers.

Applied Scientist II

Aug 2021 – Aug 2023

- Optimization, Machine Learning, and Control to solve large scale network design problems.
- Proposed novel optimization based forecasting techniques where one predicts and influences a systems' behaviour.

Applied Scientist I

May 2019 – Aug 2021

- Optimization, Machine Learning and Time Series Forecasting to enable large scale automated decision making.
- Designed hierarchical clustering techniques for time aware and multi-dimensional forecasting.

IESE

Barcelona, Spain

Research Assistant

Sep 2018 – May 2019

- Influenced policy recommendations and supported research in the Operations' Research department with computer vision analysis and statistical inference.
- Developed a model for trade-credit finance in networks with imperfect information.

EDUCATION

Universitat Politècnica de Catalunya (UPC)

Barcelona, Spain

Bachelor of Science in Civil Engineering

Sep 2013 – Jun 2017

- **Honors:** 9.6/10 GPA
- **Courses:** Algebra, Calculus, Physics, Rational Mechanics, Probability and Statistics, Differential Geometry, Mechanics of Continua, Transportation Theory, Numerical Modelling

Université Paris Dauphine

Paris, France

Bachelor in Applied Economics

Sep 2015 – Jun 2017

- **Honors:** 14.0/20 GPA (less than 10%)
- **Courses:** Microeconomics, Macroeconomics, Public Economy, International Economy, Econometrics

CentraleSupélec (Centrale Paris)

Paris, France

Master of Science in Diplôme D'ingénieur

Sep 2015 – Jun 2017

- **Honors:** 3.93/4 GPA
- **Courses:** Analysis, Probability, Statistics, Partial Differential Equations, Quantum and Statistical Physics, Mechanics, Thermodynamics, Algorithms and Programming, Software Development, Systems Engineering, Embedded Control Systems, Philosophy of Sciences
- **Thesis:** A Genetic Optimization Approach to Dynamical Systems Optimization.

Universitat Politècnica de Catalunya (UPC)

Barcelona, Spain

Master of Science in Computational Engineering and Numerical Methods

Sep 2017 – Jun 2019

- **Honors:** 9.4/10 GPA
- **Courses:** Advanced Mechanics of Continua, Advanced Numerical Modelling, Computational Engineering, Structural Analysis, Machine Learning, Advanced Transportation Theory
- **Thesis:** A Taylor Error Propagation Approach for Structural System Identification
- **Research Collaboration:** Uncertainty quantification in systems of equations.
- **Research Collaboration:** Developed an image recognition pipeline to automate Granulometric analysis.

TU Delft

Delft, Netherlands

Doctor of Science in Large Scale Network Optimization

Sep 2023 – Jun 2027

SKILLS, LANGUAGES, INTERESTS

- **Languages:** English (proficiency), French (Native speaker), Spanish (Native speaker), Catalan (Native speaker)
- **Programming:** Python, Julia, Rust, SQL, Typst, LaTeX
- **Cloud:** AWS CDK
- **Interests:** Hiking, Boxing, Climbing