



Pablo Ubilla Pavez | CV

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 [pabloubilla](https://github.com/pabloubilla)

□ EDUCATION

- To start in **PhD Machine Learning**, *INRIA - Université de Montpellier*
Oct 2025
 - Supervisor: Diego Marcos
 - Research Topic: Deep learning methods for mapping species interactions
- 2024 **MSc Ecology and Data Science**, *University College London*
 - Supervisor: Daniel Maynard
 - Thesis: How many types of trees are there? An approach using consensus clustering
 - Graduated with Highest Honours, Top 5%
- 2023 **Master in Operations Management**, *Universidad de Chile*
 - Supervisor: Charles Thraves
 - Thesis: Outlier detection for multicandidate elections with demographic groups
 - Graduated with Highest Honours, Ranked 1/15
- 2023 **Professional Degree in Industrial Engineering**, *Universidad de Chile*
 - Graduated with Highest Honours, Ranked 1/174
- 2022 **Bachelor in Industrial Engineering**, *Universidad de Chile*
 - Graduated with Highest Honours, Ranked 3/142
- 2022 **Exchange Program**, *Universiteit Leiden*

□ RESEARCH INTERESTS

Machine learning, statistics, optimization, and their application to different domains (e.g., ecology, sustainability, elections, human behaviour)

□ PREPRINTS

Thraves, Charles and Ubilla, Pablo, **A Fast Ecological Inference Algorithm for the RxC case** (2024). Available at SSRN: <https://ssrn.com/abstract=4832834>

□ WORK EXPERIENCE

- Oct 2024 – **Data Scientist & Analyst**, *Airnguru*, Remote
Present
 - Developing dynamic pricing automation using Google Cloud services
 - Market simulation to test pricing strategies
- Sep 2022 – **Data Scientist**, *Municipalidad de Vitacura*, Santiago
Jan 2023
 - Estimated street-level waste collection using GPS data and truck collection modelling
 - Optimized truck routes and daily street clusters using OR-tools to balance waste load
 - Achieved a 60% reduction in greatest time discrepancy
- Jan 2021 – **Research Assistant**, *Complex Engineering Systems Institute*
Jan 2022
 - Applied machine learning methods to impute missing data and estimate probabilities
 - Developed and optimized question selection strategies using dynamic programming, greedy algorithms, and reinforcement learning

Aug 2020 – **Intern**, *Fundación Tierra Viva*, Santiago

- Oct 2020 ○ Contributed to Chile's government environmental summary, focusing on citizen science
- Managed databases, designed conditional surveys, and diffusion campaign

□ TEACHING EXPERIENCE

(*Term season varies depending on the hemisphere)

LECTURER

Fall 2023 **Stochastic Models**, Industrial Engineering, Universidad Finis Terrae

TEACHING ASSISTANT

Spring 2024 **Applied Comp. Finance**, MSc Computational Finance, University College London

Fall 2023 **Financial Engineering**, MSc Computational Finance, University College London

Fall 2023 **Modelling and Optimization**, Industrial Engineering, Universidad de Chile

Summer 2022 **Operations Research**, Industrial Engineering, Universidad Adolfo Ibáñez

Spring 2022 **Decisions Under Uncertainty**, Industrial Engineering, Universidad de Chile

Spring 2021 **Decisions Under Uncertainty**, Industrial Engineering, Universidad de Chile

Spring 2021 **Game Theory and Strategy**, Industrial Engineering, Universidad de Chile

Spring 2021 **Operations Research**, Industrial Engineering, Universidad Adolfo Ibáñez

Fall 2021 **Operations Research**, Industrial Engineering, Universidad de Chile

Fall 2021 **Probabilities**, Industrial Engineering, Universidad de Chile

Spring 2020 **Operations Research**, Industrial Engineering, Universidad de Chile

Fall 2020 **Modelling and Optimization**, Industrial Engineering, Universidad de Chile

EXAM ASSISTANT

Fall 2022 **Probabilities**, Industrial Engineering, Universidad de Chile

Fall 2022 **Information Engineering**, Industrial Engineering, Universidad de Chile

Fall 2020 **Introduction to Calculus**, Mathematics Engineering, Universidad de Chile

Spring 2019 **Modelling and Optimization**, Industrial Engineering, Universidad de Chile

Spring 2019 **Introduction to Algebra**, Mathematics Engineering, Universidad de Chile

Fall 2019 **Probabilities and Statistics**, Mathematics Engineering, Universidad de Chile

□ AWARDS & SCHOLARSHIPS

2024 **Best Presentation Prize**, *MSc Ecology and Data Science UCL*

2024 **Dean's List (top 5%)**, *MSc Ecology and Data Science UCL*

2024 **Top Graduate Award**, *Master's Operations Management UCH*

2021 **Best Teaching Assistant**, *Industrial Engineering Department UCH*

2023 **Masters Abroad Scholarship**, *Government Funding Agency (ANID)*, (Fully funded)

2022 **Academic Excellence Scholarship**, *Master's Operations Management UCH*

2022 **International Mobility Scholarship**, *Santander Bank*

2018–2021 **Outstanding Student**, *Faculty of Physics and Mathematics UCH*

□ DISSEMINATION

TALKS

- 2024 **A Fast Ecological Inference Algorithm for the RxC case**, *Bangor, Wales*
Operational Research Society 66
- 2024 **How many trees are there? An approach using consensus clustering**, *Cardiff, Wales*
British Ecological Society Macroecology
- 2024 **A novel framework for optimized sensor deployment in biodiv. monit.**, *Surrey, England*
Surrey Wildlife Trust Showcase

POSTERS

- 2025 **A Fast Ecological Inference Algorithm for the RxC case**, *Pucón, Chile*
Workshop in Management Science

□ DEVELOPMENT

- 2023 **XVIII Summer School in Discrete Mathematics**, *Instituto de Sistemas Complejos Valparaíso*
High-chromatic graphs, Provable Algorithms for Data Mining and ML, and Linear Programming
- 2020 **9th Winter School in Engineering Systems**, *Universidad de Chile*
Black swan in power systems, Stackelberg games in security, AI challenges in big data

□ SKILLS

P. Languages	Python, R, SQL, MATLAB
Mach. Learn.	TensorFlow, PyTorch, Keras, Scikit-Learn, Gym
Optimization	Gurobi, OR-Tools, CVXPY, PuLP
Other	Git, \LaTeX , HPC

□ LANGUAGES

English	Advanced	TOEFL iBT 112/120, IELTS 8/9
Spanish	Native	
French	Elementary	

□ MISCELLANEOUS

- Participated in music bands and societies, performing at events and concerts at universities in both Chile and London
- Earned a Music Production Certificate from Projazz
- Motivated by rock climbing since 2023