

Pablo Ubilla Pavez | CV

✉ pabloubilla@ug.uchile.cl • 📄 pabloubilla.github.io/
in [pablo-ubilla-pavez](#) • 🌐 [pabloubilla](#)

Education

- 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
- 2023 **Master in Operations Management**, *Universidad de Chile*
 - Supervisor: Charles Thraves
 - Thesis: Outlier detection for multicandidate elections with demographic groups
- 2023 **Professional Degree in Industrial Engineering**, *Universidad de Chile*
- 2022 **Bachelor in Industrial Engineering**, *Universidad de Chile*
- 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 2023 – **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 biodiversity monitoring**,
Surrey, England
Surrey Wildlife Trust Showcase

Posters

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

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	

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