Pablo Ubilla Pavez | CV

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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
- 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 – Present **Data Scientist & Analyst**, *Airnguru*, Remote
- Developing dynamic pricing automation using Google Cloud services
- Market simulation to test pricing strategies

Sep 2022 – Jan 2023 **Data Scientist**, *Municipalidad de Vitacura*, Santiago
- 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 – Jan 2022 **Research Assistant**, *Complex Engineering Systems Institute*
- 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 – Oct 2020 **Intern**, *Fundación Tierra Viva*, Santiago
- 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. 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