

# Pablo Ubilla Pavez | CV

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## □ EDUCATION

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- 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

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

## □ PREPRINTS

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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

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- 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

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(\*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

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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

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### 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

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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

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

## □ MISCELLANEOUS

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- 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