Alice Lépissier, PhD

Machine Learning Engineer
AI for Climate & Finance

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🔗 Detailed CV

</> Portfolio

👤 French citizen, US green card

ABOUT ME

Machine learning engineer and computational social scientist with 13 years of experience in global climate policy and international finance.

KEY STRENGTHS

- PhD-trained statistician
- Production-grade tech stack
- Design & visualizations
- Domain expert in sustainability
- Expert communicator
- Highly adaptable & multicultural

LANGUAGES

Fluid in 🇺🇸 🇫🇷 🇪🇸, conversational in 🇮🇹

TECH STACK

- R, Python, Stata ●●●●●
- scikit-learn, XGBoost ●●●●●
- Hug. Face, LangChain ●●●●○
- GCP, DigitalOcean, VMs ●●●●○
- Git, Docker, DVC, Binder ●●●●●
- GitHub Actions, cron ●●●●○
- MongoDB, REST APIs ●●●●○
- Javascript, Node.js ●●●●○
- Linux, Bash shell ●●●●○
- HTML, CSS, Sass ●●●●○
- TₑX, Jekyll, Bootstrap ●●●●●
- NGINX, DNS, SSL ●●●●○

SKILLS

Causal inference · Economic modeling · Statistics · Machine learning · Computational methods
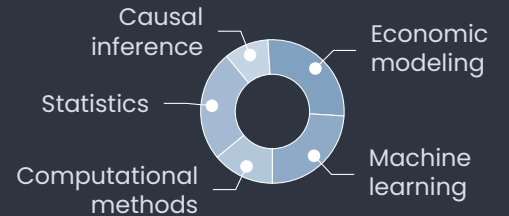
Selected experience

2024 – present	**Executive Director**	Green Finance AI

- Architecting and deploying end-to-end ML systems and infrastructure in cloud environments
- Providing technical consulting and delivering training on machine learning and AI for external clients

Spring 2023	**Lead Machine Learning Engineer**	Omdena (AI for Good)

- Used LangChain and Chroma to develop context-aware chatbot for farmers seeking to optimize nitrogen applications

2021 – 2023	**Postdoctoral Fellow**	Brown University

- Built containerized ML pipelines to analyze investments in decarbonization; managed 2 Research Assistants and 1 developer

2017 – 2020	**Instructor**	UC Santa Barbara

- 6 courses: Introduction to Research Methods, Business & Environment
- Demystified complex technical concepts in statistics and programming and received outstanding teaching evaluations

2015 – 2020	**Consultant**	Various, including United Nations

- Originated novel quantitative methodologies to trace illicit financial flows and uncover hidden trade mis-invoicing across borders
- Findings adopted by the African Union and used to inform UN policy efforts combating illicit trade in six countries
- Built global databases and user-facing tools for external clients

2012 – 2015	**Research Associate**	Center for Global Development

- Creator and lead developer of SkyShares.io, a climate simulation tool, featured in *The Guardian*
- Designed algorithmic modules for carbon budget allocation, emissions trading, and cost-optimization; built full-stack app and released open-source code and data for 190+ countries
- Directed cross-functional team of 3 and led policy outreach with UK and multilateral orgs

Education

Year	Degree	Institution
2021	**PhD Environmental Science & Management**	UC Santa Barbara
2020	**MA Statistics**	UC Santa Barbara
2011	**MSc Economic History**	London School of Economics
2010	**MSc Economics & Public Policy**	Sciences Po & École Polytechnique
2009	**BA European Social & Political Studies**	University College London

Selected projects

| Project	Description	Tech
Training Platform	Secure, containerized infrastructure for multi-user scientific computing with integrated LLM tools	JupyterHub, GCP
SkyShares	Scientific web app for climate, with server-rendered logic, custom numerical solvers, and interactive UI	JavaScript, MongoDB
Illicit AI	Fully reproducible ML pipeline for imputing missing trade data	Python, R, Binder
Illicit activity detection	Jupyter Book showcasing unsupervised machine learning methods for trade anomaly detection	Python
Reproducible data science container	Docker image to spin up JupyterLab & RStudio in a VM container, Binder-compatible for portable and reproducible external use	Docker
Genetic algorithm	Genetic algorithm for numerical optimization & image reconstruction	R

Leadership and public outreach

Papers	Please refer to my 📄 CV for a complete list of publications
Service	• Speaker (Mila AI) • Conference org. (Assoc. for the Advancement of AI) • Board (LSE Econ Hist.) • Open-source code (26+ repos) • Peer reviewer • Op-eds & blogs • Thesis supervision (Brown) • Mentoring