



JORGE VALLEGO

AI & Data Engineer | Ethical AI | Founder of The H4rmony Project

Bio

Jorge Vallego has an extensive background in information technology and data-driven systems, with professional expertise in Data Science, Machine Learning, and Artificial Intelligence. He works as a Data Science and Engineering Consultant, and has taught, mentored, and trained professionals and students in both industry and academia, focusing on data science and related fields. Jorge leads the H4rmony Project, an initiative exploring the intersection of AI and ecolinguistics. He also serves as the AI Language Models Subject Representative for the International Ecolinguistics Association.

His research interests include ecocentric AI, sustainability-oriented natural language processing, and the ways in which language influences environmental awareness.

Areas of Expertise

- Ethical AI & LLM Alignment
- Natural Language Processing
- Data Engineering & Architecture
- Database Design
- AI & Ecolinguistics Research

Key Roles & Contributions

Founder & Technical Leader, The H4rmony Project

2023 - Present

- Lead an interdisciplinary network of over 30 collaborators worldwide, including academics, linguists, NLP engineers, translators, and science communicators
- Organise research, development and outreach for AI systems aligned with ecological and ethical values
- Develop eco-aligned LLMs using preference datasets and narrative evaluation benchmarks
- Chatbot integration with MCP servers, Knowledge Graphs and RAG
- Build multilingual benchmarks for ecological narrative detection in AI models
- Presented at Hugging Face, UK, Italian and Uruguayan universities and international ecolinguistics events
- AI Subject Representative to the International Ecolinguistics Association and co-founder of the Latin American Ecolinguistic Association

Independent Consultant | Data Engineering, ETL, ML and AI

2015 - Present

- Delivered Machine Learning solutions in finance, water management, and real estate
- Migrated and optimised complex data systems on premises and cloud environments
- Designed and developed data warehouses and data lakes
- Developed several applications using SQL Server, Oracle, PostgreSQL and Python
- Clients included large enterprises to medium-sized businesses and startups.

Data Architect / Engineer IFDS Group (DST/SS&C)

2004 - 2015

- Designed data solutions for financial applications
- Developed bespoke enterprise ETL systems.
- Designed and developed company wide reconciliation systems.

Publications and Scholarly Contributions

- Ecolinguistics and AI: Integrating Eco-awareness in NLP
- AI Ethics from an Ecolinguistic Perspective (Medium, Zest, SomosNLP, arXiv, etc)
- Speaker at AIA32 2025, DIS-4Change, IEA and university-hosted conferences in UK, Italy, and Uruguay

Education and Certifications

- IBM AI Engineering Specialisation
- IBM Data Science Specialisation
- Johns Hopkins Data Science Specialisation
- Advanced coursework in Machine Learning, Deep Learning and NLP
- Formal education in Software Engineering, Ecology and Music Theory