

Alonso Valdés González

Data Scientist | Economist | Full-Stack Developer

Email: empleo@alonsovaldes.com | <https://alonsovaldes.com>

GitHub: github.com/Alonsomar | LinkedIn: linkedin.com/in/alonso-valdes-gonzalez

Professional Summary

Data Scientist and Full-Stack Developer with over 8 years of experience in quantitative analysis, econometrics, and the development of data and AI applications. Experienced in building end-to-end products with Python, SQL, React, TypeScript, Supabase, and Docker to automate complex processes and support decision-making.

Professional Experience

Full-Stack and AI Developer

DOMA – Remote, Spain | **January 2026 – Present**

- Developed a SaaS platform for architecture firms that automates the review of municipal permit files in two phases: document admissibility and regulatory analysis.
- Implemented the frontend using **React**, **TypeScript**, and **Supabase**, including authentication, case management, intelligent document upload, realtime features, admin dashboard, SII/cadastre maps, and PDF reports.
- Integrated AI workflows with **Gemini** and **Edge Functions**, including contextual chat with SSE streaming, retrieval over urban planning regulations and private documents, and operational support for the pilot.
- Technologies: **React**, **TypeScript**, **Supabase**, **PostgreSQL**, **Gemini API**, **Edge Functions**, **Cloudflare**, **Docker**, **RAG**, **LLM embeddings**.

Data Scientist and Application Developer

Lentisco – Madrid, Spain | **March 2024 – July 2025**

- Developed an interactive web application using **Dash** and **Flask** for visualizing large volumes of data, optimizing browser performance through advanced metadata management.
- Built an ETL pipeline processing 1M+ Spanish public procurement records, integrating web scraping across 6 government platforms (PLACE, Catalonia, Madrid, Andalusia, Galicia, La Rioja) covering 2017–2025.
- Optimized data loading times, achieving a reduction in response times through Redis cache implementation.
- Integrated dynamic filters with a modern design, improving user experience in terms of usability and smoothness.
- Technologies: **Python**, **Dash**, **Flask**, **Docker**, **MariaDB**, **ElasticSearch**, **FastAPI**, **Plotly**, **SQL**, **Playwright**, **GitHub**, **Redis**, **Pydantic**, **OpenAI API**, **Docling**, **Streamlit**, **Beautiful Soup**, **Numpy**, **Pandas**, **n8n**, **Supabase**, **LLM**.

Data Scientist Analyst | Actuarial Analyst

Budget Office of the Ministry of Finance – Santiago, Chile | **2021 – 2023**

- Built an actuarial microsimulation projecting Chilean pension system spending through 2100, processing 80M+ monthly contribution records (10% population sample) from the national Pension Data System.
- Developed stochastic projection models to analyze the sustainability of the **Pension Reserve Fund**, using **Monte Carlo** simulation techniques.
- Evaluated the impact of the COVID-19 Employment Protection Law through **propensity score matching** and **probit** models to measure the relationship between employment coverage and pension contributions.
- Technologies: **Python**, **Stata**, **Numpy**, **Pandas**, **scikit-learn**, **Matplotlib**, **Excel VBA**, **Statsmodels**, **Beautiful Soup**.

Macroeconomic Analyst

Budget Office of the Ministry of Finance – Santiago, Chile | 2018 – 2020

- Performed advanced macroeconomic analysis and contributed to key reports, such as the **Structural Balance** and the **Quarterly Public Finance Report**.
- Automated budget execution reports and analyzed revenue and expenditure projections for the **Central Government**.
- Evaluated the fiscal impact of legislative projects, such as the **Tax Reform**, using econometric models and fiscal scenario projections.
- Technologies: **Python, Stata, Excel VBA**.

Education

Master's in Data Science, Big Data & Business Analytics. Complutense University of Madrid – Madrid, Spain | 2023 – 2024

Master's Final Project: predictive model for real estate prices in Spain, using Random Forest, scraping from Pisos.com/Trovit, and OpenStreetMap POIs. Deployed with Streamlit and Docker. Achieved 20% higher accuracy than the baseline.

Master's in Economics. Adolfo Ibáñez University – Santiago, Chile | 2016 – 2017

Bachelor's in Economics. Adolfo Ibáñez University – Santiago, Chile | 2012 – 2015

Skills

- **Data Analysis & Automation:** Python, SQL, Stata, NumPy, Pandas, Statsmodels, scikit-learn, BeautifulSoup, Playwright, Selenium, n8n, ETL.
- **Machine Learning & AI:** PyTorch, TensorFlow, Optuna, HuggingFace, OpenAI API, Gemini API, RAG, LLM embeddings.
- **Full-Stack Development:** React, TypeScript, Vite, Supabase, FastAPI, Dash, Flask, Streamlit.
- **Data Visualization & Deployment:** Plotly, D3.js, P5.js, Folium, Matplotlib, Seaborn, Docker, PostgreSQL, GitHub Actions, Cloudflare.
- **Languages:** Spanish (native), English (B2), learning Portuguese and French.

Certifications and Recognitions

TOEFL iBT 77 pts. (B2) 2023 · EF Set 71 pts. (C1) 2022 · TOEIC 810 pts. (B2) 2015

Machine Learning - PH125.8x: Data Science: Machine Learning, edX - Harvard University

Second Place in the Pro Scholarship – Master's Final Project Competition, Complutense University of Madrid – 2024. Awarded for the development of a predictive model for housing prices and its deployment in an interactive web application using **Streamlit** and **Docker**.

Publications

- Long-term Fiscal Revenue Estimation 2020-2060. 2021. Dipres.
- Research Note: Treatment of Temporary Reversible Tax Measures in the Structural Balance Calculation, Ministry of Finance, Chile, 2020.
- Cyclically Adjusted Balance Indicator, Methodology and Results 2019. June 2020.
- Research Note: Cyclical Adjustment of Fiscal Revenues from Copper: Evaluation and Proposals. 2019. Dipres.
- Cyclically Adjusted Balance Indicator Methodology and Results 2017. June 2018.