

Cristóbal Middleton Frederick

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PROFESSIONAL PROFILE

Industrial engineer who builds products with data. I currently plan demand for fragrance and makeup brands at **Puig**. Before that, two years as a **data scientist**, putting price and forecasting models into production. On the side I build and run **TORDO**, an open site with Chile's public procurement data, and **PixelFrame**, an online store for mosaic wall art.

WORK EXPERIENCE

Puig Santiago, Chile
Demand Planner Executive Aug 2026 – Present

- **Demand planning** for Rabanne, Carolina Herrera Makeup, Banderas, Agatha Ruiz de la Prada and Quorum, among others: I decide how much of each to bring in.
- Building a **demand forecasting model**, served through an application I built myself.

Macal Santiago, Chile
Data Scientist Aug 2024 – Aug 2026

- Developed an **apartment price predictive model** with automated retraining and **deployment** via **GCP endpoints (Cloud Run connected to GitHub)**. Achieved **17% lower error** than the previous method and **>1000x time reduction** (+18 hrs/week saved).
- Developed **forecasting models**: vehicle sales amount projection (**23% lower error**) and an **optimal investment budget** estimation model in collaboration with the marketing team.
- Developed a **text matching and normalization algorithm** (brand-model-version) for the automotive industry, integrating **API-based data fallback**.
- **MLOps**: End-to-end development, **productionization**, monitoring, and maintenance of predictive models.
- **Automation and orchestration of pipelines** (ETL/ELT) hosted on departmental servers.
- Built **QuickSight and Looker dashboards** and automated reports with **KPIs** for strategic analysis and tracking.

Working Holiday Visa Sydney/Lamington, Australia
Potts Point Hotel & Lamington National Park Jul 2023 – Jun 2024

- One-year international experience working in **high-pressure environments** requiring rapid cultural adaptation.
- Strengthened **interpersonal skills**, **problem-solving** abilities, and **self-management**.

Macal Santiago, Chile
Product Manager BI Jul 2021 – Apr 2023

- End-to-end management of vehicle product lines and complementary services. Generated **actionable insights** for business growth.
- Created a **financial product** that captured **91% of previously unaddressed traffic**, increasing **profitability by 12%** compared to prior credit products.
- Implemented **pricing improvements** based on demand and vehicle/customer segmentation, resulting in a **35% increase** in bookings within the most profitable segment.
- Led continuous development of **fintech and insurance products** in coordination with lenders, UX, UI, PO, and IT teams.
- Developed **Tableau dashboards**, reports, and **KPIs** for performance monitoring.

Spurgeon Santiago, Chile
Project Manager (side project) 2022 (5 months)

- Managed the build and sale of a **software product for Lipigas**.

Los Parques S.A. Santiago, Chile
Management Advisor Oct 2020 – May 2021

- Developed and managed **KPIs** for monitoring sales force performance and targets.
- **Automated reporting** and provided support for **data governance** initiatives.
- Supervised the design and development of a **mobile application** for client portfolio management focused on digital transformation. Trained **200+ executives**. Reduced management-contact time by **90%** and increased contacted clients by **20%**.
- Designed marketing campaigns, conducted market analysis, and built the **annual budget**.

- Supervised the **commercial call center**. Led operational reorganization resulting in a **1.3x increase in occupancy** and a **+15% sales growth**.

Los Parques S.A.

Business Intelligence Analyst

Santiago, Chile
Jun 2019 – Sep 2020

- Portfolio analysis, campaign redesign, and construction of **segmented commercial strategies**. Achieved a sustained **+3% monthly increase** in campaign performance.
- Developed **lead assignment flows** and campaign automation, reducing creation and distribution time by **15x**.
- Provided support in **management control**, market research, and commercial reporting.

Mercado Libre

Intern

Santiago, Chile
Aug 2018 – Jan 2019

- Analyzed **e-commerce logistics operations** and explored **data-driven strategies**.
- Developed a **logistics provider evaluation project** and managed buyer response **SLAs**.

PROJECTS

TORDO – tordo.cl

Oct 2025 – Present

- Free public site with Chile's **public procurement data** (Mercado Público) for small businesses that sell to the State: prices paid per product, competition per market and today's open quick purchases. In production since October 2026.
- Weekly pipeline in **Polars** over three years of purchase orders, materialized in **PostgreSQL** and served with **FastAPI**, **Next.js** and an **MCP** server. Open source: github.com/cris-middleton/tordo.
- Published **data notes** on errors found and how they were fixed; e.g. orders in UF that inflated municipal spending to CLP 14 trillion a year, against the official 4.15.

PixelFrame – pixelframe.cl

Apr 2026 – Present

- Online store for mosaic wall art made with compatible building blocks, built with **Astro** and **TypeScript**. Takes payments through **Mercado Pago** and **Webpay**.

SKILLS

Data & MLOps:

Python (pandas, Polars, numpy, scikit-learn, matplotlib, tensorflow), Advanced SQL, PostgreSQL, BigQuery, GCP Vertex AI, Docker, MLflow, Prefect, Git.

BI & Analytics:

Tableau, Looker, QuickSight, Power BI.

Web Development:

FastAPI, Next.js, TypeScript, Astro.

Areas of Specialization:

Machine Learning (Regression, Classification, Clustering), Pricing, Segmentation, Process Automation, Pipeline Orchestration, Data Storytelling.

Languages:

Spanish (Native), English (C1 - Advanced), French (A1 - Beginner).

Courses and Certifications:

Stanford Machine Learning Specialization (Ongoing), Google Machine Learning Bootcamp, Scrum Foundation Professional Certificate, Python Programming (UC, DataCamp).

EDUCATION

B.S. & M.S. Industrial Engineering — IT Minor

Universidad Adolfo Ibáñez, Santiago, Chile

2014 – 2019

International Baccalaureate Diploma (IBDP)

Saint Gabriel's School, Santiago, Chile

2013