

# Cristian Correa Sandoval

AI Engineer | Data Scientist  
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## Summary

AI Engineer and Industrial Engineer (Universidad de Chile) with 6+ years turning data into business decisions – from ETLs and optimization models to ML in production and, currently, generative-AI conversational agents. I build LLM-based agents end-to-end: LangGraph orchestration, FastAPI services, distributed memory, end-to-end infrastructure on GCP via Terraform, and node-level observability with Langfuse.

## Current Employment

### FALABELLA RETAIL

*Santiago, Chile*

AI Engineer

Design and ship production-grade LLM conversational agents built on LangGraph graphs (runtime context, variable injection, subgraphs, interruptions), prototyped in Google ADK and migrated to LangGraph for production.

## Education

### UNIVERSIDAD DE CHILE

*Santiago, Chile*

Ingeniería Civil Industrial (Industrial Engineering), 2014 – 2022

## Technical Skills

<b>Languages</b>	Python, SQL, R, Julia, Lua
<b>GenAI / LLMs</b>	LangGraph, Google ADK, Langfuse, RAG, agent design
<b>ML / DS</b>	XGBoost, scikit-learn, label engineering, batch inference, batch training, fine-tuning, model evaluation
<b>Backend</b>	FastAPI, PostgreSQL
<b>Cloud / MLOps</b>	AWS (Sagemaker, Athena, S3, RDS), GCP (Cloud Run, Cloud Storage, Firestore, Redis, Secret Manager), Docker, Terraform, CI/CD
<b>BI / Viz</b>	Looker Studio, Power BI, Tableau, D3.js

## Experience

2025–Present      **AI Engineer**      *Falabella Retail, Santiago, Chile*

- **Sales conversational agent:** drives product sales with 10s average latency per message, backed by a two-tier memory design – short-term in Redis, long-term in Firestore and PostgreSQL – for persistent, multi-session context.
- **Business-insights agent (Looker Studio):** generates dynamic SQL queries on demand and returns tailored business reports with 1 min average query latency, plus error-recovery and governance mechanisms.
- **Infrastructure & CI/CD:** built the full CI/CD pipeline with Terraform (IaC), provisioning the complete GCP stack (Cloud Run, Firestore, Redis, Cloud Storage, Secret Manager).
- **Observability:** instrumented node-level tracing of agent graphs with Langfuse to monitor cost, latency, and quality in production.

2023–2025      **Data Scientist**      *Consortio, Santiago, Chile*

- Led end-to-end data science initiatives with ML Engineers, from label engineering and EDA to deploying and monitoring models in production on AWS.
- **Propensity models (banking & insurance):** XGBoost regression for lead propensity + multilabel classification for product recommendations, improving targeted marketing.
- **Contactability optimization:** predictive model prioritizing the best phone numbers using internal and purchased data; raised reachability and lowered acquisition cost via uncertainty-based optimization.
- **Scalable ML pipelines on AWS Sagemaker:** distributed training, async and multi-model endpoints, Athena integration, and compressed-JSONLines batch inference, reducing inference time and cost.
- Generalized pipeline architecture across projects and ran internal upskilling workshops.

- 2023                            **Optimization Projects Leader**                            *SCM Latam, Santiago, Chile*
- Led development of products with advanced optimization engines and consolidated the area.
  - Built engines for optimal staffing per contract, overtime offsetting, regulation-compliant work-schedule generation, and efficient schedule allocation.
- 2021–2022                    **Workforce Management Consultant**                            *SCM Latam, Santiago, Chile*
- Developed Python optimization models for HR challenges across multiple countries and sectors.
  - Led implementation of tech solutions and creation/enhancement of cloud-based products.
- 2021                            **Thesis Student**                            *GlobeItalia, Santiago, Chile*
- Researched and implemented optimization models to forecast monthly product demand and reduce stockouts, automating result generation with Python.
- 2020–2021                    **Data Analyst**                            *Falabella Financiero, Santiago, Chile*
- Built Tableau dashboards on financial indicators and automated their refresh with Python ETLs.
- 2019–2020                    **Business Process Analyst**                            *Seguros Falabella, Santiago, Chile*
- Mapped company processes (As-Is flows) and ran activity studies to generate efficiencies; led improvement of the paperless project.