FRANCISCO YIRÁ ALBORNOZ

Data scientist and economist

Data scientist, bachelor of economics, and highly skilled R programmer. I have experience using machine learning to solve business problems in retail and marketing/CRM, answering business questions through statistical modelling and causal inference, and automating processes and reports.

I am passionate about enabling data-driven decision making and use data to solve problems and generate social impact. I like challenges and I am eager to learn more and share knowledge with others

CONTACT AND MORE

🌐 My data science blog

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🎓 FORMAL EDUCATION

2021 | 2020

University of Chile, Faculty of Economics and Business
Diploma in Applied Econometrics   📍 Santiago, Chile

10-month program covering experimental design, causal inference with observational data and time series analysis.

2018 | 2017

Pontifical Catholic University of Chile, Faculty of Engineering
Diploma in Big Data   📍 Santiago, Chile

144-hour program covering the fundamentals of machine learning, recommender systems, Hadoop, parallel computing and graph theory.

2015 | 2010

University of Chile, Faculty of Economics and Business
B.S. in Economics   📍 Santiago Chile

Graduated with distinction. 5-year program.

SKILLS

Highly skilled in R (tidyverse, rmarkdown and other packages), data visualisation, and explaining complex ideas in a straightforward way.

Experienced and proficient in SQL, Python, Git, statistical analysis, machine learning, causal inference and experimental design (A/B Testing).

Familiar with the AWS ecosystem and tools.

💼 PROFESSIONAL EXPERIENCE

2021 | 2020

Data Scientist, Marketing
WOM S.A. (Telecommunications)   📍 Santiago, Chile

- Used interpretable modeling techniques and unsupervised learning to guide the prioritisation of network infrastructure deployments. The resulting insights were made available to stakeholders via interactive reports, using packages such as `flexdashboard` and `plotly`.
- Trained predictive models with the ML framework H2O to better target potential customers through call centre campaigns.
- Performed impact evaluations of network investments using A/B testing, differences in differences, and matching.

2019 | 2018

Data Scientist, Marketing
Walmart (Retail)   📍 Santiago, Chile

- Developed data transformation processes and implemented machine learning models that allowed the deployment of a personalized marketing strategy for the company's most important local brand. This included the development of churn models and clustering on transactional data.
- Led the development of an internal R package aimed at streamlining processes and accelerating deliveries in our area.
- Introduced the use of version control and unit tests to the team.

Last updated in April 2022.

2018
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2017

Data Analyst, Marketing
Walmart (Retail)   📍 Santiago, Chile
- Gave answers to business questions from Walmart merchants and the marketing team by integrating multiple data sources with R and SQL, and by applying statistical modelling, econometrics and data visualisation techniques.
- Automated ad-hoc reports by using parametrised R Markdown documents.
- Improved the impact evaluation of key company decisions by incorporating causal inference methodologies in otherwise descriptive analyses.

2017
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2015

Trainee, Public Sector Sales team
Oracle (Software and IT)   📍 Santiago, Chile
- Supported my sales team by automating reports with VBA.
- Kept track of sales opportunities KPIs.
- Demoed Oracle products to government clients.
- Developed a market study about innovative ways to sell Oracle products.

2013

Research Assistant
Libertad y Desarrollo (Think Tank)   📍 Santiago, Chile
- Coauthored published research on shale gas' economic impact.
- Updated the institute's public data bank.
- Assisted in research about energy, environment and labour market issues.

🖥 PROJECTS AND ADDITONAL COURSEWORK

2022

DevOps on AWS
Coursera
- 4-course specialisation introducing the AWS ecosystem and walking through hands-on exercises about DevOps concepts and tasks.

2022

Causal Inference with R (blog posts series)
Self-learning project
- A series of articles in which I explain key causal inference concepts and methodologies in simple terms and with lots of code examples and visualisations.

2021

Analysing my music collection with Python and R
Self-learning project
- An analysis I did to practice Python skills. It involved importing and transforming XML data and performing data wrangling and visualisation.
- I also combined Python and R code through the `reticulate` package to leverage the R visualisation capabilities on top of the `pandas` data pipeline.

2020

Data collection for a survey of higher education institutions
Ministry of Education, Chilean government   📍 Santiago, Chile
- Developed R scripts to automatically create custom forms for each higher education institution, and then consolidated the completed forms into a single dataset by using Python scripts.

2017

BI Dashboards development
KMA Asset (Real estate investment trust)   📍 Santiago, Chile
- Developed R scripts to automatically consolidate data from multiple CRM sources.
- Developed dashboards in Power BI on top of that data to enable analysis and monitoring of business metrics (conversion KPIs, customer acquisition cost, etc).

PUBLICATIONS AND PRESENTATIONS

2019 **alicer: An internal R package to accelerate Walmart Chile analytics** *(Spanish)*
LatinR: Latin American Conference on the Use of R in Research + Development.
Presentation on our success case at Walmart developing R packages to accelerate workflows in the marketing analytics team.

2017 **Have America's political parties lost control over their presidential nominations?** *(Spanish)*
University of Chile's academic repository.
Undergraduate thesis for Economics major. A statistical analysis of the factors that drive presidential nominations in the US political system, expanding on 'The Party Decides' (M. Cohen, 2008) by leveraging new data and the Chow structural break test.

LANGUAGES

English
Fluent. IELTS Band 8.0.

Spanish
Native speaker.

French
Basic user (A1).