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**EDUCATION**

**Federico Santa María Technical University**  
Valparaíso, Chile  
B.S. in Electronic Engineering  
M.S. in Electronic Engineering  
GPA: 92%  
Specialty: Machine Learning.  
Thesis: "Protein functions prediction using Deep Learning."

## PAPERS & WORKSHOPS

DOI: [10.1109/ACCESS.2021.3094723](https://doi.org/10.1109/ACCESS.2021.3094723)

## SKILLS

# Nicolás Ignacio Fredes Franco

## EXPERIENCE

### Lead Artificial Intelligence Engineer

Remote, USA  
Since January 2026  
Optimize AI to intelligently match 8 different languages using LangChain and Google-ADK, to support complex industrial workflows.

### Senior Machine Learning Engineer

Las Condes, Chile  
November 2025 - January 2026  
Develop a machine learning architecture for an agentic system (agent-based plant), reducing end-to-end processing time by 30%.

### Lead Data Scientist

Remote, Mexico  
September 2024 - October 2025  
Develop a time-series forecasting algorithm for predicting protein functions at different levels of temporal granularity. This work represents a significant advance for intervals of 15 minutes to 1 year, achieving results with an  $R^2$  of 0.95.

Developed a generative model (leveraging time series) to identify patterns in modal generative LLM. This work enables AI agents to explain variable processing. It processed data in real-time, 0 seconds.

### Computer Vision Engineer

Santiago, Chile  
February 2024 - September 2024  
Developed a computer vision system to detect security cameras in self-service kiosks in Mexico and OXXO. The algorithm identifies people who are not paying. It was capable of running on a NVIDIA Jetson Xavier, with each frame processed in less than 1 second, the alert delay time on the system.

### Senior Data Scientist

Remote, USA  
May 2023 - October 2023  
Developed a data science solution across both physical and digital domains for cross-channel analysis, estimating cross-channel conversion rates for their price strategy.

### Senior Data Scientist

Quilicura, Chile  
November 2021 - November 2022  
Developed a recommendation system for e-commerce products using a neural network system with a latency of up to 1 millisecond.

### Artificial Intelligence Specialist

Valparaíso, Chile  
January 2020 - November 2021  
Developed a fault detection system to evaluate the annual change in the price of products considered by 200% of competitors' promotions price and increasing its accuracy by 50%.

## LANGUAGES

Spanish Native Speaker  
English Level CEFR C1

Developed a fault detection system of a Torre S.A. production line. Switching from faulty manual registration with 10-minute delays to an automated method of vision algorithms connected to a unified database with real-time data availability with a maximum delay of 1 second and 95% accuracy.