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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 ML architecture for an agentic AI system (agent-based plant), reducing end-to-end latency by 30%.

### Lead Data Scientist

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

Developed a generative model (leveraging large language models and time series) to identify patterns in protein sequences. Trained a unimodal generative LLM. This work involved developing a framework for AI agents to explain variable-length protein sequences and processing. It processed data at a rate of 1000 sequences per second.

### Computer Vision Engineer

Santiago, Chile  
February 2024 - September 2024  
Developed a computer vision system to detect anomalies in surveillance cameras in self-service kiosks in Mexico and OXXO. The algorithm was able to identify specific behaviors such as people paying for only a portion of their purchase. It was capable of running on a NVIDIA Jetson Xavier, with each detection taking less than 100 milliseconds, setting a new record for the alert delay time on the market.

### Senior Data Scientist

Remote, USA  
May 2023 - October 2023  
Developed a data science solution across both physical and digital channels for a major supermarket chain. Performed data analysis, estimating cross-channel sales and creating a recommendation system for their price strategy.

### Senior Data Scientist

Quilicura, Chile  
November 2021 - November 2022  
Developed a data science solution for a major supermarket chain. Performed data analysis, creating a recommendation system for their price strategy, and developed a machine learning model to predict sales based on historical data and external factors.

### Artificial Intelligence Specialist

Valparaíso, Chile  
January 2020 - November 2021  
Developed a fault detection system for a major supermarket chain. The system used machine learning to detect anomalies in the production line and automatically switch to a backup line if a fault was detected. This reduced downtime by 50%.

Spanish Native Speaker  
English Level CEFR C1

Developed a fault detection system for a major supermarket chain. The system used machine learning to detect anomalies in the production line and automatically switch to a backup line if a fault was detected. This reduced downtime by 50%.

## LANGUAGES

Spanish Native Speaker  
English Level CEFR C1