

Experience

Arturo Lopez Perez Foundation cancer clinic (FALP)

Santiago, Chile

Image Processing Engineer

August 2021 – February 2024

- Managed Latin America's first successful surgical broadcast using 5G technology, delivering lossless real-time transmission of 4 Full-HD feeds to 10+ doctors and trainees over distances of 20-100 km, in collaboration with the Japanese government, Allm Inc., and NTT Data.
- Developed FALP's tumor registry visualization web platform to summarize cancer treatment data of more than 20000 patients, easing doctors decision making and researchers access to real and HIPAA compliant cancer data. Technical stack: PostgreSQL, FeatherJS, VueJS, Echarts.
- Researched and developed an open source pipeline to analyze 165 meta-genome data using QIIME 2 API. Pipeline implemented using Bash scripts and Python.

Create SPA

Santiago, Chile & Remote

Full Stack Developer (Part time)

October 2019 – October 2025

- Developed and presented a proof-of-concept mobile app for patient health history exchange using FHIR standards. Flutter front-end on a Golang RESTful API backend.
- The app was used at the 4th Connectathon of Latin America and the Caribbean, demonstrating interoperability readiness to technical officials from 15+ government health departments.
- Mentored and provided technical assistance to government health officials from multiple countries on FHIR interoperability standards and best-practice implementation.
- Advised on and facilitated the strategic deployment of FHIR solutions within national infrastructure.

PSINet

Santiago, Chile

Machine Learning Engineer

August 2020 – July 2021

- Managed the development of a traffic sign deterioration video recognition tool that accelerated mining site road maintenance by reducing inspection times by 3 hrs/week. Algorithm implemented with Pytorch and group image/video annotation using CVAT.
- Engineered a full-stack web platform (Flask/Angular) for automated collection and processing of multiple Covid-19 indicators across Chile.

CEAMOS

Santiago, Chile

Machine Learning Researcher (Part time)

September 2016 – April 2019

- Designed and prototyped a crime forecasting model using Neuronal Networks, leveraging historical spatial and temporal crime data to predict future trends.

Education

University of Chile

Santiago, Chile

Master in Computer Science, Text Processing and Computer Vision

2021

University of Chile

Santiago, Chile

Computer Science Engineering

2021

Skills & Interests

Programming Languages: Python, Javascript, Golang, NodeJS, SQL, C.

Libraries: Fastify, FastAPI, Sequelize, NumPy, Pandas, Express, Echarts.

Frameworks: Pytorch, VueJS, NextJS, FeatherJS, Angular.

Language: Advanced English (C1), Native Spanish and Upper Beginner Mandarin (HSK3).

Papers:

Use of 5G technology for oncological surgery streaming	2023
N Bravo, I Paredes, L Loyola, G Vargas	
Data and Metadata 2, 126-126	

Simultaneous and Spatially-Resolved Analysis of T-Lymphocytes, Macrophages and PD-L1 Immune Checkpoint in Rare Cancers	2022
K. Cereceda, N. Bravo, R. Jorquera, R. González-Stegmaier, F. Villarroel-Espíndola	
Cancers, 14(11), 2815	

Querying Wikimedia images using Wikidata facts	2018
S. Ferrada, N. Bravo, B. Bustos, A. Hogan	
Companion Proceedings of the The Web Conference 2018, 1815-1821	

Interests: Video game development, Chinese Culture and Weight Lifting.