

Martín Bravo

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EDUCATION

KTH Royal Institute of Technology

Exchange Student, Machine Learning

Stockholm, Sweden

August 2024 – June 2025

University of Chile

Bachelor's of Engineering in Computer Science

Santiago, Chile

March 2021 – June 2025

Advised by [Prof. Aristides Gionis](#)

RESEARCH EXPERIENCE

- "Optimizing Federated Learning with k -Median Clustering: Theoretical Guarantees and Performance Analysis". with A. Gionis and S. Dalleiger. *In Preparation*.

WORK EXPERIENCE

Hopsworks AI

Machine Learning Engineer Intern

Stockholm, Sweden

January 2025 – Present

- Developed the Code Generator Assistant, an AI-powered tool that automates the generation of ML pipelines and code snippets for data preprocessing, model training, and deployment, reducing development time by 50%.
- Integrated the assistant with Hopsworks, enabling seamless interaction with the UI to generate custom Python snippets, improving workflow efficiency for users.
- Optimized pipeline execution by implementing routing mechanisms, reducing redundant computations and improving performance by 75%.

SoyMomo - AI Products for Family Safety

Machine Learning Engineer Intern

Santiago, Chile

December 2023 – August 2024

- Designed and deployed HeyMomo, an interactive AI assistant built with LangChain, AWS, and Node.js/Express.js, improving child-friendly voice interactions for 10,000+ users.
- Developed and deployed a baby cry classification model on Azure ML, achieving 92% accuracy in detecting needs such as hunger and discomfort, achieving a response time of 2 seconds.
- Developed a data pipeline for audio processing, standardizing recordings into 8-sec clips and extracting key features, improving model performance.

National Center for Artificial Intelligence (CENIA)

Student Intern

Santiago, Chile

September 2023 – December 2023

- Fine-tuned Stable Diffusion for a museum exhibit, configuring Automatic1111 to generate theme-based AI-generated art, showcased to 1,000+ visitors.
- Developed a Flask-based interactive UI on tablets, allowing visitors to generate personalized AI-generated images.

TEACHING EXPERIENCE

Lecturer, *KTH AI Student Course*, KTH Royal Institute of Technology, 2025.

Head Teaching Assistant, *Data Structures and Algorithms*, University of Chile, 2024.

Head Teaching Assistant, *Introduction to Programming*, University of Chile, 2023.

Head Teaching Assistant, *Computer Tools*, University of Chile, 2023.

Teaching Assistant, *Introduction to Calculus*, University of Chile, 2023.

SKILLS

Programming: C++, Python (PyTorch, Scikit-learn, Pandas), JavaScript (React, Node.js).

Tools: Git, Docker, Kubernetes, Hopsworks, Azure ML, AWS, GCP.

Interests: Data Privacy, Federated Learning, Explainable AI, AI Ethics.

Languages: Spanish, English, Swedish (Intermediate).

PROJECTS

Interpreting Object Detection using B -cos

Stockholm, Sweden

KTH Royal Institute of Technology

October 2024 – January 2025

- Implemented B -cos layers in ResNet18 for image classification and extended it to YOLO for object detection.
- Analyzed the impact of architectural choices such as the absence of $ReLU$, normalization, and bias terms on interpretability and accuracy.
- Project conducted as part of the *Advanced Deep Learning* course (DD2412) at KTH, available at the [project page](#).

Serverless ML System for IMDb Movie Rating Prediction

Stockholm, Sweden

KTH Royal Institute of Technology

October 2024 – January 2025

- Developed a fully automated ML pipeline using Hopworks and GitHub Actions, managing data ingestion, feature engineering, model training, and inference.
- Built a web UI that displays predicted IMDb ratings for new movies, allowing users to compare predictions with actual IMDb scores via direct IMDb links.
- Project conducted as part of the *Scalable ML and DL* course (ID2223) at KTH, available at the [project page](#).

AWARDS

- **3rd Place**, *Chilean Air Force Data Competition*, 2024.
- **1st Place**, *Bachelor in Computer Science*, University of Chile, 2024.
- **Outstanding Student Award**, *University of Chile*, 2021, 2022, 2023.
- **Full Scholarship for Admission Exam Score**, *University of Chile*, 2021.
- **2nd Place**, *Chilean National Olympiad in Mathematics*, 2017.

ORGANIZATIONS

Member, *KTH AI Society*, 2024 ([Post](#)).

Member, *AIClub Chile*, 2023 ([Post](#)).