


ADRIANA ORELLANA




 **Nationality:** Bolivian

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 **Authorization:** B

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PROFILE

I am very excited about how technology is improving and the opportunities it is creating. Through programming and research, I want to contribute to solving problems and automating tasks to enhance people's lives.

EDUCATION

Master in Computer Science

September 2023 - August 2025

École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland

Specialization: Data analytics

Bachelor's Degree in Computer Systems Engineering

February 2017 - July 2021

Universidad Privada Boliviana (UPB), Cochabamba, Bolivia

CGPA 94.23/100 - Summa Cum Laude

PROFESSIONAL EXPERIENCE

Distributed Information Systems Laboratory (LSIR), EPFL

July 2024 - September 2024

Student Assistant

- Developed a conflict analysis application using Streamlit, Large Language Models (GPT-4o-mini and Gemma 2 9B), and prompt engineering to extract and visualize key stakeholders, positions, and evidence from news articles about conflicts.

Center for Research in New Information Technologies (CINTI), UPB

June 2021 - August 2023

Research Assistant

- Implemented exposure, focus, and calibration of a low-cost spectrometer with a mercury or neon lamp for SpectraUPB, a mobile spectrometry app built with Flutter.
- Developed an open-source Booking System using Angular for remote laboratory access, used by EUBBC Digital project members (Erasmus+ program).
- Developed a Spectrometry Remote Lab using Angular, enabling remote interaction with spectrometer features and lights.
- Processed spectral images with OpenCV, integrated models to detect elements such as neon and mercury, and calibrated a low-cost spectrometer for a portable Raspberry Pi solution.
- Developed a crawler task distribution system, enabling the collection and analysis of a large volume of GitHub repositories.

Truextend

July 2020 - August 2020

Software Developer Intern

- Implemented CI/CD and Docker to automate the software delivery process of an internal application.
- Enhanced login, main microfrontend and other internal apps by fixing bugs and adding new features.

PROJECTS

Structuring Argumentation in Online Debate Using Large Language Models

Master research project, EPFL

February 2024 - June 2024

Fine-tuned Llama 3 8B and Mistral 7B v0.2 using LoRA for argument quality assessment. The best models were evaluated on Kialo, an online debate platform, where their assessments were closely aligned with real user scores.

Alpaca Tutor: A LLM-Based Chatbot for Assisting Students in STEM Courses

Modern natural language processing course, CS-552, EPFL

April 2024 - May 2024

Contributed to the development of an AI assistant for STEM students, fine-tuning Llama 3 8B using LoRA and Direct Preference Optimization. Used a synthetic dataset generated with GPT4-o and Llama 3 70B incorporating chain-of-thought examples.

SKILLS

- Programming languages:** Python, JavaScript
- Frameworks and libraries:** Pandas, Streamlit, Pytorch, OpenCV, Unsloth, LitGPT, Hugging Face
- Web development:** Angular, HTML, CSS
- Others:** Docker, Git, SQL

LANGUAGES

Spanish: Native

English: Advanced - TOEFL score 100 (2023)