ALEXANDER LIQUE

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ABOUT ME

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SKILLS

Collaboration Adaptability

Decision Making Creativity

Self-Motivation

I consider myself someone with a keen interest in research. I am particularly focused on investigating and exploring projects in Data Science and Artificial Intelligence, constantly seeking opportunities to contribute and advance in these fields. I am ready to tackle new challenges that foster my professional growth and development.

TECHNICAL SKILLS

Python Scala | C++ Javascript SQL

PL/pgSQL MongoDB

PostgreSQL ChromaDB

EDUCATION

University Student National University of Engineering

Mar. 2019 - Jan. 2024

- Lima, Peru
- I completed my studies in Computer Science.

Summer Studies Fundação Getulio Vargas

a Jan. 2024 - Feb. 2024

- Rio de Janeiro, Brazil
- Took courses at the School of Applied Mathematics at FGV, focusing on Machine Learning and Computer Graphics.

Matlab Pytorch Tensorflow

OpenCV Pandas Sklearn

PowerBI Tableu Seaborn

Hadoop NLTK Spark

RAG LangChain ONNX

DVC MLflow React

EXPERIENCE

Machine Learning Engineer | ICA PUC-Rio

Jul. 2024 - Now

Lima, Perú

• Currently, I work as a developer, machine learning engineer, and researcher at the ICA Laboratory of PUC-Rio, where I contribute to the design, development, and research of Machine Learning and software-based solutions. My work focuses on addressing complex challenges in the oil and gas sector, closely collaborating with the laboratory team on various research projects.

Node js **FastAPI** Odoo

React N **Jenkins** Streamlit

Heroku **AWS** Flask

Docker

Machine Learning Engineer | IMPACTO AI

Jun. 2023 - Oct. 2023

Lima, Perú

 In my previous role, I managed and developed chatbots (WhatsApp, Messenger, Instagram) using advanced technologies like ChatGPT and NLP. I also researched the latest AI models, such as Large Language Models (LLMs), to implement them in the company's solutions. Additionally, I contributed to projects involving OCR, image generation, Speech Recognition, and designed databases for the sales platform.

LANGUAGES

Spanish: Native **English: Intermediate** Portuguese: Basic

CERTFICATES

in Udemy

Machine Learning with Python

Specialized Program - Deep Learning

in DeepLearning.Al

Data science

in CTIC-UNI

Software Developer | Ganemo

Oct. 2022 - Abr. 2023

Lima, Perú

 Software developer focused on testing and programming in the Odoo ERP, with experience in analysis, design, programming, testing and maintenance of business applications. Skills in Python, databases and containers, and use of agile methodologies such as Scrum and Kanban to ensure deadlines and software quality.

Software Developer Freelance | Smart City Lab

- **Aug.** 2022 Apr. 2023
- Lima, Perú
- Developer and researcher at CTIC-UNI's SMART CITY, working on interdisciplinary projects in IoT, software, and artificial intelligence, as well as cloud computing. Proficient in various technology areas with practical experience applying technology to complex problems in different fields.

HONORS & A-

ABET Project Fair and Competition | National University of Engineering

- **Sep.** 2022
- Lima, Perú
- First place in the project fair for ABET accreditation 2022-1 at the Faculty of Sciences, UNI, in the Computer Science category Group II (5th -8th cycle). The project focused on studying transformerbased architectures to predict ratings in Yelp reviews.

Summer Program FGV **EMAp**

- **ä** Jan. 2024
- RJ. Brazil
- I was selected as one of the ten students to receive a Grant-in-aid for Latin American students interested in participating in these courses at the FGV mathematics school. Rio de Janeiro, Brazil.

ACADEMIC IN-TERESTS

Data Science NLP

Computer Vision

Machine Learning

Deep Learning

Evolutionary algorithm

HOBBIES

Reading Books

Football (Soccer)

Music

Research

PROJECTS

Genetic Algorithm Optimization for Convolutional Neural Networks

- Nov. 2023 Mar. 2024
- We were researching a genetic algorithm to build convolutional neural networks for classification problems. The project focuses on configuring the hyperparameters of a convolutional network using genetic algorithms.
- Tecnologías: Python, Jupyter Notebook, Pytorch.

Football Player Tracking | 😯 | 🏶





- Oct. 2022 Jun. 2023
- Research focused on personalized player tracking in football videos using computer vision techniques like Cond-DETR. Algorithms such as DEEPSORT and HSV were combined to achieve customized tracking.
- Technologies: Pytorch, Python, OpenCV, HuggingFace, Jupyter NoteBook.

Rating Prediction in Reviews | 😯 | 🏶





- **i** Jan. 2022 Sep. 2022
- I researched advanced natural language processing architectures, such as Transformers (BERT, ROBERTA, ELECTRA), for star rating classification on the YELP reviews dataset. I utilized Streamlit, PyTorch, and Python to explore and select the most suitable architecture.
- Technologies: Pytorch, Python, Streamlit, Jupyter NoteBook, Hugging Face.

Chatbot Acecom | 😯 | 🌐





- i Jun. 2021- Jan. 2022
- Contributed to the implementation of a chatbot based on neural networks for a web application deployed on Heroku. Used technologies such as Tensorflow, PyTorch, FastAPI, React, and Hugging Face for natural language processing pre-processing. Applied skills in AI, web development, teamwork, and NLP tools.
- Technologies: Tensorflow, Pytorch, Python, Heroku, Netlify, React, FastApi, Hugging Face.

EXTRACURRICULAR

Member ACECOM

📋 Mar. 2021 – Jan 2024

- Lima, Peru
- I was part of the board of directors of the association (Treasurer).
- I was a co-organizer for the realization of an exhibition of the Breca group at the Faculty of Science.
- I served as the head of the Artificial Intelligence area, where our focus was on promoting research in machine learning among members, as well as undertaking projects related to MLOps, data science, and data engineering.

Expositor ExpoScience FC

Nov. 2023



• Participation in the Faculty of Science ExpoScience with the aim of disseminating the research and activities conducted at the university to children from various schools. In this exhibition, my team and I presented the use of reinforcement learning in two agents competing for a ball. To achieve this, we utilized a Gym environment and neural networks with PPO.