

Alexander Olmedo

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EDUCATION

Moscow Institute of Physics and Technology

Moscow, Russia

B.Sc. in Applied Mathematics and Computer Science

September 2021- July 2025

- Relevant Coursework: Statistics, Probability, Real Analysis, Linear Algebra, Algorithms and Data Structures, Databases, Parallel and Distributed Computing, Convex Optimization, Machine Learning, Natural Language Processing, Reinforcement learning.

EXPERIENCE

AI Research Intern

February 2025 - Present

Cyber-Physical Systems Laboratory, Skolkovo Institute of Science and Technology

Moscow, Russia

- Developed a privacy-focused engineering agentic system using local models to automate technical documentation processing while ensuring data confidentiality
- Implemented a locally-hosted retrieval-augmented generation (RAG) pipeline for secure handling of sensitive engineering documents

Math Teacher

July 2023 - March 2025

Piensa Latam

Remote

- Conducted mathematics teaching for high school students, focusing on advanced problem-solving skills for Mathematics Olympiads.
- Taught specialized topics, including number theory, combinatorics, and geometry.

PROJECTS

Thesis Project: Exploring Fine-Tuning of Multimodal Large Language Models for Generation of Language Learning Exercises

Sep 2024 - Present

Moscow Institute of Physics and Technology

- Implementing parameter-efficient fine-tuning of multimodal LLMs (Qwen2.5-VL:3B, Gemma3:4b) using QLoRA to enhance visual-textual understanding for educational content generation
- Optimizing model performance through quantization techniques while maintaining generation quality for language learning applications

AWARDS

International Mathematical Olympiad (IMO), Honorable Mention

Saint Petersburg, Russia 2020

International Mathematical Olympiad (IMO), Participation

Bath, United Kingdom 2019

Ibero-American Mathematics Olympiad, Honorable Mention

Guanajuato, Mexico 2019

TECHNICAL SKILLS

Programming Languages: Python, C++, C, JavaScript, SQL

Machine Learning & AI: PyTorch, Scikit-learn, Hugging Face, Transformers, LLM Fine-tuning and RAG pipelines

Big Data Technologies: Hadoop, Spark

Databases: SQL (Postgres)

Containerization: Docker, Kubernetes

Languages: Spanish (native), English (fluent), Russian (Intermediate)