

Alejandro Leonardo García Navarro

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Education

BEng in Data Science and Engineering Sep 2021 - Jul 2025

Universidad Carlos III de Madrid

- Bachelor Thesis: "Generative Agent-Based Models for Simulated Interactions: A Framework for Experiment Design" (Grade 10/10, nominated for honors)
- Year abroad at Concordia University, Montreal — Santander Estudios Scholar (1 of 22 top-tier grants among 110 awarded)
- Awarded 3 government scholarships recognizing academic performance

Professional Experience

Repsol, LLM Engineer Intern Feb 2025 - Present

- Helped develop 25+ production-ready LLM-based agents for workflow automation
- Implemented prompt engineering strategies that improved output quality and task reliability
- Developed RESTful APIs that enabled LLMs to interface with external tools and execute complex tasks autonomously





Repsol, IT&D Business Partner Intern Sep 2024 - Feb 2025

- Coordinated project milestones, tracked deliverables, and managed departmental cost reports to support on-time and on-budget project completion

Universidad Carlos III de Madrid, AI Research Engineer Sep 2023 - Present

- Developed and trained deep learning models (GAN, CTGAN) using PyTorch to generate synthetic network traffic datasets, achieving 80%+ similarity to real data
- Benchmarked prompt strategies across 5 LLMs, increasing problem-solving accuracy by up to 30%
- Designed a reinforcement learning algorithm for network routing, keeping latency spikes below 14.8%

Selected Publications

CTGANs for Generating Synthetic Traffic Matrices in Wide Area Networks		Jun 2025
Introducing Large Language Models as the Next Challenging Internet Traffic Source		Apr 2025
On the Use of Large Language Models at Solving Math Problems: A Comparison Between GPT-4, LLaMA-2 and Gemini		Mar 2025
Developing Cost-Effective Drones for 5G Non-Terrestrial Network Research and Experimentation		Sep 2024

Skills

Programming: Python, R, HTML, CSS, JavaScript, Node.js, Express.js
ML/AI Frameworks: Scikit-learn, PyTorch, Gensim, spaCy, NLTK, OpenCV, Pillow, TorchVision
Data & Infrastructure: SQL, NoSQL, PostgreSQL, MongoDB, Redis, Docker, Kubernetes
Languages: Spanish (Native), English (C1), French (C1), Catalan (B1)