

Gabriel Lozano

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PROFILE

I am a double-degree mathematician and computer scientist who took an early interest in data science. I have worked in multiple production environments and have a strong background in software development and coding competitions. I have experience in data science and databases.

EDUCATION

Ecole Polytechnique	Paris, France
<i>PhD in Informatics / Large-scale query plan representation with data augmentation and query optimization</i>	Sep 2025 — Sep 2028
CentraleSupélec (Université Paris-Saclay)	Paris-Saclay, France
<i>M2 Big Data Management and Analytics</i>	Sep 2023 — Sep 2025
National University of Colombia	Colombia
<i>B.Sc. Computer Science</i>	
<i>B.Sc. Mathematics</i>	Feb 2016 — Dec 2021

WORK EXPERIENCE

M2 internship: An AI-Assisted SQL Generator for Model Training.	Mar 2025 — Aug 2025
École Polytechnique	Paris
<ul style="list-style-type: none">Worked with Prof. Yanlei Diao.Worked in a SQL generation paper in a A* conference.	
Machine Learning Engineer	Feb 2022 — Sep 2023
Instaleap (SaaS company)	Bogota
<ul style="list-style-type: none">Deployed multiple services in production following agile methodologies.Worked on last-mile delivery systems for major supermarkets in Latin America.Used cloud technologies, especially AWS.	
Visiting Scholar	Aug 2021 — Feb 2022
Purdue University	West Lafayette, IN, USA
<ul style="list-style-type: none">Collaborated with Prof. Michael Levine.Published work on machine learning applied to genomics, focusing on non-parametric clustering.	
Software Engineer Intern	Jun 2020 — Dec 2020
Twilio (SaaS company)	Bogota
<ul style="list-style-type: none">Researched fraud detection in phone verification services using data analysis.Deployed code for a high-availability service (99.99% uptime).Worked with Java, Kafka, Google BigQuery, Kibana, and DataDog.	
Computer Science Lab Assistant	Dec 2016 — Jul 2019
National University of Colombia	Bogota
<ul style="list-style-type: none">Worked with Prof. Francisco Gomez (https://sites.google.com/site/fagomezj/home).Contributed to computational modeling of biological systems.Published work using computer vision in ecology.	

PROJECTS

MobilityDB contribution

- Open-source contribution: created an in-memory index for the spatio-temporal PostgreSQL extension MobilityDB.

UnCodeGL

<https://pypi.org/project/UnCodeGL/>

- Developed a Python library for encoding information using coding theory.

Belgium Trains real-time dashboard

- Built a Grafana dashboard for real-time monitoring and decision support on the Belgian rail network.

Chess extension for PostgreSQL

- Developed a chess extension with indices and chess operations for PostgreSQL.

Graph-based recommendation system

- Scraped large-scale media datasets and built a recommendation system using Neo4j and graph embeddings.

PUBLICATIONS

- Lozano, Gabriel, et al. (2017). “Characterization of skin patterns in Pseudoplatystoma Magdaleniatum.” In: 2017 Sustainable Internet and ICT for Sustainability (SustainIT). IEEE.
- Lozano, Gabriel; Nadia Atallah; Michael Levine. (2023). “Non-parametric clustering of RNA-sequencing data.” In: Statistical Analysis and Data Mining: The ASA Data Science Journal 16(6), 2023.
- Lyu, Chenghao, Guillaume Lachaud, Gabriel Lozano, and Yanlei Diao. “Graph Transformers for Query Plan Representation: Potentials and Challenges.” In VLDB 2026-52th International Conference on Very Large Databases. 2026.

SKILLS

- **Topics:** Big Data, Data Science, Machine Learning, Deep Learning, Databases
- **Tools:** Spark, PostgreSQL, AWS
- **Programming:** Python, C, PyTorch
- **ML Areas:** NLP, Computer Vision
- **Languages:** Spanish(Native), English (C2), French(A2)