

ALEJANDRO LOPEZ

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EDUCATION

DOCTOR OF SCIENCE IN PETROLEUM ENGINEERING

The University of Texas at Austin

August 2027

GPA: 3.82

- **Research:** Monitoring of Underground Hydrogen Storage in Porous Media (Petrophysics)
- **Awards and Relevant Achievements:**

- Officer Representative – SPEWLA Student Chapter

POSTGRADUATE DIPLOMA IN PROJECT MANAGEMENT

Universidad America – Colombia

Dec 2020

GPA 4.7/5.0

Distinction “Suma Cum Laude”

- **Awards and Relevant Achievements:**

- Scholarship for a Postgraduate Diploma.
- Officer Representative – SPE Student Chapter

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Universidad America – Colombia

Dec 2020

GPA 4.67/5.0

Distinction “Suma Cum Laude”

- **Awards and Relevant Achievements:**

- Research group BIOSIDE 2020 - Speaker at the Sustainable Development Congress Universidad del Bosque 2020
- Officer Representative – AIChE Student Chapter

BACHELOR OF SCIENCE IN PETROLEUM ENGINEERING

Universidad America – Colombia

June 2019

GPA 4.67/5.0

Distinction “Suma Cum Laude”

- **Awards and Relevant Achievements:**

- Scholarship for a Postgraduate Diploma.
- Officer Representative – SPE Student Chapter

PROFESSIONAL EXPERIENCE

GRADUATE RESEARCH ASSISTANT - *The University of Texas at Austin*

August 2023 – May 2027

- Formation evaluation for hydrogen storage using MonteCarlo simulations and NMR [Simulation & Machine Learning]
- Developed experimental and modeling techniques to study mechanical properties of salt caverns.

RESERVOIR ENGINEER Jr. – Reservoir Management Team

ECOPETROL- Bogota, Colombia

April 2023 – Dec 2024

- Conducted reserves estimation and production forecasting to guide development planning and optimize recovery strategies.
- Analyzed production data, performed Decline Curve Analysis (DCA), and applied material balance techniques for field evaluation.
- Enhanced dynamic reservoir models by addressing key uncertainties and proposing risk mitigation strategies.
- Performed PVT fluid characterization, core analysis (RCAL and SCAL), well test interpretation, and production data evaluation

SIMULATION ENGINEER Jr.

Oct 2021 – August 2022

TACHYUS – Bogota, Colombia

- Developed and implemented an analytical simulation model for waterflooding in the Infantas South Area using Sahara and Tachyus software.
- Applied Tachyus data-driven solutions to optimize field operations and enhance base production for the LCI Field.

COMPLETION AND DRILLING ENGINEER Jr.

Nov 2019 – Feb 2021

ECOPETROL – Bogota, Colombia

- Updated the well history events database – Flamencos Field.

TECHNICAL PUBLICATIONS

- An integrated dynamic modeling workflow for acid gas and CO2 geologic storage screening in saline aquifers with faults: A case study in Western Canada <https://doi.org/10.1016/j.ijggc.2024.104258>
- Risk analysis using a fuzzy logic model in the construction of the Hidroituango hydroelectric project <https://hdl.handle.net/20.500.11839/8755>
- Design of a methodology for evaluating pulse water injection for the Chichimene field <https://hdl.handle.net/20.500.11839/7638>

ADDITIONAL INFORMATION

Languages: Spanish (Native Language), English (Fluent), French (Beginner)

Computer Skills: Python, UTAPWells, Combo Curve, Eclipse, Gohfer, Petrel, Techlog, Interactive Petrophysics IP, OFM, CMG Simulation.

Relevant Courses: Advanced Petrophysics, Unconventional Formation Evaluation, Goestatistics, Machine Learning.