# Ali Lara

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* Austin, TX

## Summary

Experienced Chemical Engineer with a strong focus on process improvement, statistical and mathematical modeling, and data analytics. Proficient in Python, MATLAB, and Hysys, with a proven track record in optimizing processes and leading teams to achieve productivity gains. Bilingual in English and Spanish, eager to leverage skills in a dynamic data analysis and geochemical fingerprinting role.

## Skills

* **Data Analysis & Processing**: Proficient in Python, MATLAB, and Hysys for statistical modeling, signal processing, and noise analysis.
* **Database Management**: Advanced knowledge of SQL, eager to develop further skills in database and online platform management (incl. AWS).
* **Algorithm Development**: Experience in designing algorithms for optimization, regression, and pattern recognition.
* **Process Improvement**: Lean, Six Sigma methodologies for operational efficiency enhancement.
* **Team Leadership & Collaboration**: Strong leadership skills, proficient in bilingual communication and cross-functional team collaboration.

## Professional Experience

### Amazon Logistics, Austin, TX

#### Assistant Area Manager

Nov 2020 - Present - Demonstrated exceptional performance and leadership, progressing quickly through increasingly responsible roles within Amazon’s logistics operations.

- Led diverse teams (up to 75 members) in high-pressure environments, processing up to 135,000 packages daily. Managed all aspects of inbound workflow, loading/unloading systems, and yard management.

- Enhanced operational efficiency and productivity through strategic planning and resource allocation, resulting in significant improvements in processing rates and safety standards.

- Developed and implemented Python-based data analysis tools, automating key operational tasks and supporting data-driven decision-making.

- Created and utilized predictive models and Excel-based tracking tools to optimize package distribution and reduce process defects by 75%.

- Implemented a random forest model for package distribution, reducing ADTA-related errors by 20% and non-productive time by 25%.

- Coached and mentored associates on performance standards, safety protocols, and operational best practices, contributing to a culture of continuous improvement and learning.

### MCL Control - Venezuela

#### Chemical Engineer

May 2012 – Sep 2019 - Engineering support for creating mathematical models and simulating gas/oil processes using commercial process simulators

- Shaped machine learning algorithms to develop predictive models and optimize the performance of advanced control algorithms for gas/oil processes

- Assisted researchers team in engineering a standard workflow for implementing non-parametric statistical models in oil/gas processes

- Engineered neural network models in Python/Tensorflow to estimate physical parameters required by process simulations to improve the application performance

- Mentored 10+ junior engineers over one year on using XGBoost and random forest models to optimize the feature selection for machine learning projects

- Gathered information, identified analytical requirements, and developed data-driven based models to translate complex business needs into actionable analytic projects

### Universidad Central of Venezuela - Venezuela

#### Lecturer in Chemical Engineering

Mar 2005 – Nov 2020 - Researched chemical reaction engineering, mathematical modeling, simulation and optimization, process synthesis and design using machine learning techniques for industrial process evaluation

- Lectured in several chemical engineering areas, including thermodynamics, chemical reactor design, numerical methods, industrial process simulation, and statistical modeling

- Proposed a problem-solved learning experience in different subjects following the ABET guidance.

- Coached 200+ chemical engineering undergraduates with regards to academic pathways and toward degree completion and established and provided career counseling for a network of cooperatives, internships, and externships to foster academic to-industry pipeline

### Latest Projects

- Logistics Process Automation (2023): Developed tools to optimize logistics operations, leading to improved workflow efficiency.

- Solar Hydrogen Production Plant Design (2020): Researched sustainable energy solutions, focusing on process efficiency and optimization.

- HAZOP Study Facilitation Tool (2021): Created a tool to enhance HAZOP studies for industrial process safety.

- Performance Prediction in Industrial Processes (2019): Utilized machine learning for predictive modeling in turbo-compressor operations.

Education

* Universidad Central of Venezuela, M.Sc. Chemical Engineering – 2008
* Universidad Central of Venezuela, B.Sc. Chemical Engineering - 1998
* Relevant Coursework: Advanced Data Analysis, Statistical Modeling

## Languages

* English (Fluent)
* Spanish (Fluent)