

# ALI LARA

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## SUMMARY

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Accomplished Chemical Engineer with a robust background in operations management and research. Expert in process modeling, statistical modeling, and machine learning, leveraging tools such as Matlab, Hysys, and Python. Proven leader in optimizing workflows and enhancing productivity through data-driven decision-making. Bilingual in English and Spanish, with a strong commitment to continuous learning, diversity, and inclusivity. Demonstrates adaptability and conflict resolution skills, fostering a harmonious and productive work environment

## SKILLS

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- Process engineering: Statistical modeling, Mathematical modeling, Matlab, Hysys
- Machine learning: Python, Pandas, Keras, Scikit-Learn, TensorFlow, timeseries datasets.
- Skilled in interpreting and applying insights from scientific papers to develop innovative, data-driven solutions
- Management skills: Team leadership, strategic planning, performance monitoring

## EXPERIENCE

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### Associate Area Manager, Amazon (Austin, TX)

Mar 2023 – present

- Spearheaded a team of 75, devising an efficient inbound workflow that successfully processed over 70,000 packages daily
- Optimized workflow processes, significantly reducing setup and processing time while prioritizing safety
- Strategically assessed labor plans to meet operational goals
- Leveraged real-time manufacturing metrics to adapt team resources effectively, enhancing productivity in 20%
- Monitored performance metrics and proactively identified retraining opportunities for T1-associates, fostering a culture of continuous learning

### Yard Marshal, Amazon (Columbus, OH)

Dec 2021 – Mar 2023

- Led a 15-member team to develop an efficient loading/unloading system, successfully handling over 40,000 packages daily
- Built an Excel-based tracking tool, dramatically reducing process defects by 75%
- Strategically prioritized commercially crucial deliveries, optimizing business operations
- Ensured comprehensive safety measures for docks, trailers, and delivery vehicles, promoting a secure work environment
- Upheld the accuracy and integrity of the station trailer yard, ensuring efficient logistics operations

### FC Associate, Amazon (Columbus, OH)

Nov 2020 – Dec 2021

- Sought ongoing skill development on under-performing associates to meet production goals
- Outperformed KPIs designed for tracking T1-associates performance: 379 UPH, 500+ average stow rate, which represented being at the 95th percentile
- Classified hazardous residues following federal and local EPA/RCRA standards for handling, disposal, or shipping
- Used technical knowledge to troubleshoot any issues related to damaged packages, processing hazmats, returns, and third-party contractor shipping
- Coached Day-1 and Week-1 associates in standards of work and safety culture

### Chemical Engineer, MCL Control (Venezuela)

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

- Researched chemical reaction engineering, mathematical modeling, simulation and optimization, process synthesis and design, including economic assessments, process integration, and 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

## **PROJECTS**

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- Design of an industrial plant for solar hydrogen production by water splitting - 2020
- Led a research project on sustainable energy solutions using concentrated solar thermal energy to produce hydrogen.
- Compared different hydrogen production technologies, overcoming data limitations, and demonstrating knowledge of the latest developments in the field.
- Used mathematical modeling and simulation to optimize the plant's electric power production, resulting in the selection of alkaline electrolysis as the most efficient technology and contributing to its commercialization.
- Develop a semi-automatic tool for HAZOP nodes detection from industrial process P&IDs - 2021
- An assistive tool to perform HAZOP studies based on autoregressive models and machine learning techniques in compliance with design specifications - 2020
- Prediction of turbo-compressors performance degradation using deep learning techniques - 2019

## **EDUCATION**

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**Correlation One - Amazon, Data Analytics BootCamp**

**DataCamp.com, Python for Data Scientist**

**Universidad Central of Venezuela, M.Sc. Chemical Engineering**

**Universidad Central of Venezuela, B.Sc. Chemical Engineering**