

ALFREDO GARCIA
Industrial Chemical Engineer | Project manager | Maintenance supervisor
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PROFILE

Industrial Chemical Engineer with proven experience in industrial maintenance, water treatment, electrical installation supervision, and operation of heating and cooling equipment such as cooling towers, chillers, furnaces, and boilers. Specialized in project management, emergency response, physicochemical water analysis, and Wastewater Treatment Plant (WWTP) operations. Solid knowledge in developing preventive and predictive maintenance plans, root cause analysis (RCA), and continuous improvement projects to reduce downtime and operational costs. Proven ability to lead teams, develop maintenance strategies, and ensure methodical regulatory compliance (STPS, SEMARNAT, ISO, OSHA, 5S's, etc).

JOB EXPERIENCE

Truper group, Jilotepec, State of Mexico

may 2023 – currently

Position: Project Leader | Commercial Supervisor | Maintenance Technician

I led data analysis and industrial maintenance projects focused on critical equipment such as boilers, chillers, cooling towers, and induction furnaces.

Main achievements and responsibilities:

- Managed warehouse operations and chemical inventories (corrosion inhibitors, biocides), ensuring compliance with national regulations.
- Supervised daily operations, designed training programs for technical staff, and fostered a culture of continuous improvement.
- Performed physicochemical analyses on boilers, chillers, and cooling towers, generating technical reports with operational observations and recommendations.
- Used specialized chemicals (HCl, NaOH, hypochlorite, sulfites, scale inhibitors) for water treatment.
- Implemented predictive and corrective maintenance programs, reducing downtime of critical equipment by 25%.
- Supervised the purging, cleaning, and inspection of boilers, chillers, treated water lines, and cooling towers.
- Coordinated technical meetings with project leaders, clients, and suppliers, making key decisions regarding maintenance, purchasing, and operational strategies.
- Achieved contract renewals thanks to outstanding results in efficiency and quality, strategically managing human and material resources.
- Managed warehouses and chemical products, optimizing purchasing and reducing operating costs by 10%.

Truper group, Jilotepec, State of Mexico

february 2022 – april 2023

Position: Occupational Health and Safety Supervisor

Responsible for supervising high-risk activities, including working at heights and handling lifting equipment, ensuring strict compliance with safety regulations.

Main achievements and responsibilities:

- Implemented protocols for working at heights (elevated platforms), achieving zero accidents and 100% compliance with national regulations.
- Ensured adherence to national regulations, through daily equipment inspections and 5-minute safety training sessions.

- Optimized the selection and procurement of Personal Protective Equipment (PPE), achieving an 8% cost reduction without compromising quality.
- Generated risk reports aligned with national standards and regulations for internal audits.
- Promoted a culture of safety through daily 5-minute talks focused on risk identification and proper use of PPE.
- I trained operational technical staff in risk identification, proper use of PPE, emergency response, signage, and working at heights, emphasizing national standards and regulations.
- I implemented safety protocols for working at heights (elevating platforms), achieving 100% compliance in inspections and reducing incidents to zero during my tenure.
- I inspected and verified equipment before each workday.
- I coordinated risk activities and drills with safety, anchoring, and rescue protocols.

MODASTAGE, Jilotepec, State of Mexico

july 2018 – february 2022

Position: Wastewater Maintenance and Treatment Supervisor

I managed industrial wastewater treatment equipment, optimizing the operation of critical systems such as DAF, reverse osmosis, biological reactors, and multimedia filters.

Main achievements and responsibilities:

- I implemented preventive maintenance programs, reducing downtime by 20% and improving water treatment efficiency.
- I supervised physicochemical analyses (pH, COD, TSS) in compliance with national standards and regulations.
- I coordinated mechanical and electrical maintenance of pumps, motors, blowers, and pipes.
- I conducted regular monitoring of parameters such as pH, EC, TSS, COD, TDS, and DT, generating technical reports for decision-making.
- I coordinated emergency responses regarding leaks and direct contact with chemicals such as HCl, hypochlorite, bisulfites, NaOH, and HNO₃.
- Development of projects to optimize resources, reduce waste, and control contaminants in the plant.
- Use of profit and loss management software (such as Microsoft Excel, Power BI, and SAP), optimizing the use of inputs and operating efficiency.
- Supervision and training of technical staff in treatment processes, physicochemical analysis, and industrial safety and hygiene.
- Inventory control, strategic purchasing, and supplier negotiations.

AIReTech, Tepeji, Hidalgo

october 2017 – february 2018

Position: Production Assistant (Professional Internship)

I led a resource management project that reduced production waste by 15% per week through raw material optimization and the implementation of KPIs. I collaborated across departments to standardize processes and implemented Lean Manufacturing for efficiency.

Main achievements and responsibilities:

- Led a key resource management project at an aluminum foundry, reducing production waste by up to 15% weekly through optimized raw material management

- Implemented an optimal raw material allocation system that reduced weekly waste by 15% through consumption analysis and inventory planning
- Designed and launched Key Performance Indicators (KPIs) for production and waste, strengthening continuous monitoring and data-driven decision-making
- Coordinated interdepartmental communication (Production, Warehouse, and Quality) to standardize procedures and develop integrated work plans
- Developed a batch-based waste management plan, optimizing material transport and storage, and achieving savings in logistics costs
- Applied continuous improvement methodologies (Lean Manufacturing and 5S) to optimize supply flow and reduce downtime

CIATEQ, Toluca, State of Mexico

february 2017 – july 2017

Position: R&D Intern (Dual Education System)

I contributed to innovation in dielectric glove coatings, developing three polyurethane (PU) formulations that met ASTM D120-14a standards. I prepared technical reports and presentations that streamlined R&D investment decisions.

Main achievements and responsibilities:

- Contributed to innovation in developing polyurethane foam glove coatings, creating functional prototypes for dielectric gloves that satisfactorily met applicable technical standards (ASTM D120-14a validated)
- Developed 3 functional polyurethane (PU) formulations, meeting ASTM D120-14a standards and validated through dielectric tests
- Optimized polyurethane foam mixtures for dielectric glove coatings, validating mechanical and electrical properties in compliance with safety standards
- Prepared detailed technical reports and progress presentations for project leaders, stakeholders, and clients, expediting R&D investment decisions
- Collaborated with multidisciplinary teams on documenting laboratory procedures and quality control

GISA, Toluca, State of Mexico

october 2016 – february 2017

Position: Quality Intern (Dual Education System)

I collaborated in the quality department, performing destructive tests (cutting and abrasion) under OSHA, ANSI, and ASTM standards and generating reports that reduced rework by 18%. I managed product inspections and reduced rejects by 15% through a traceability system. I trained more than 10 operators in GLP and ISO 9001.

Main achievements and responsibilities:

- Actively collaborated in the quality department, verifying and ensuring the excellence of manufactured gloves. Performed advanced quality tests and prepared reports that contributed to the continuous improvement of prototypes and processes
- Executed destructive tests (cutting and abrasion) according to OSHA, ANSI, and ASTM standards, from sample preparation to results analysis

- Generated quality findings reports presented to project leaders, driving significant improvements in the dielectric glove prototype, identifying critical design flaws through statistical analysis, reducing rework by 18%
- Managed inspections and release of imported and internally produced products, ensuring compliance with technical specifications and regulations
- Implemented a traceability system for imported products, reducing rejections by 15%
- Instructed over 10 operators on GLP (Good Laboratory Practices) protocols and ISO 9001 standards, including product review, correct storage, laboratory practices, and effective communication

EDUCATION

TecNM, Jilotepec, State of Mexico

september 2013 – june 2018

Chemical Engineering – Bachelor of Science (B.S.)

TecNM, Jilotepec, State of Mexico

september 2016 – june 2018

Sustainable Chemical Processes – Specialization

Harmon Hall, Tlalnepantla, State of Mexico

april 2020 – june 2020

TKT (Teaching Knowledge Test) – Certification

Harmon Hall, Tlalnepantla, State of Mexico

september 2018 – march 2020

English (Nivel B2) – Certificate

SKILLS

DATA ANALYSIS:

- SQL (Intermediate)
- Python (Intermediate)
- Excel (Advanced)
- Power BI (Intermediate)
- Predictive Analysis
- Data Cleaning

PROFESSIONAL SKILLS:

- Team Leadership
- Negotiation
- Communication with Project Leaders and Departments
- Problem Solving
- Strategic Thinking

MARKETING:

- Google Digital Marketing
- User Experience Design (UX Design)
- E-commerce Store Creation

PROJECT MANAGEMENT:

- Project Life Cycle

- Agile/Kanban Methodologies
- Budget Management
- Resource Optimization
- MS Project

COURSES

Process Data from Dirty to Clean

Learn data cleaning techniques to prepare datasets for accurate analysis and decision-making.

Link: <https://www.coursera.org/account/accomplishments/records/UYC34HXYH6P1>

Cybersecurity

General overview on strategic cybersecurity, threats and practices to protect against each specific threat.

Link: <https://www.coursera.org/account/accomplishments/specialization/42TMRTZ680RR>

Google Data Analytics Specialization

Gain expertise in data analysis, visualization, and communication to drive business decisions.

Link: <https://www.coursera.org/account/accomplishments/specialization/TJ7VCIUNWQZ>

Data Analysis with R Programming

R Programming for Data Analysis, Visualization, and Statistical Modeling

Link: <https://www.coursera.org/account/accomplishments/records/Y1AVG31VLZ3G>

Prepare Data for Exploration

Organize, clean, and structure data to allow for meaningful exploration and insight.

Link: <https://www.coursera.org/account/accomplishments/records/VC3NWQT3EZNK>

Google Cloud Computing Foundations: Data, ML, and AI in Google Cloud

Data Exploration, Machine Learning & AI with Google Cloud.

Link: https://www.cloudskillsboost.google/public_profiles/fa3a9f9e-63f7-49da-81ed-0eb397f21f77/badges/13418499?locale=en&utm_medium=social&utm_source=linkedin&utm_campaign=ql-social-share

Google Marketing Digital e E-Commerce Specialization

Learn how to develop digital marketing and e-commerce skills, including SEO, analytics, and customer engagement.

Link: <https://www.coursera.org/account/accomplishments/specialization/PATUSGA2T1RT>

Introduction to Cybersecurity

The course covers the basics of cybersecurity, starting with the basic concepts such as data protection, threats, and attack prevention.

Link: https://www.credly.com/badges/ad8c0d1f-c97f-45f3-8056-cf15afee4e4d/linked_in_profile

Set Up an App Dev Environment on Google Cloud

Set up application development environments using the Google Cloud tools for smooth deployment.

Link: https://www.cloudskillsboost.google/public_profiles/fa3a9f9e-63f7-49da-81ed-0eb397f21f77/badges/13435460?locale=en&utm_medium=social&utm_source=linkedin&utm_campaign=ql-social-share

Prepare Data for ML APIs on Google Cloud

Prepare and integrate datasets with machine learning APIs on Google Cloud.

Link: https://www.cloudskillsboost.google/public_profiles/fa3a9f9e-63f7-49da-81ed-0eb397f21f77/badges/13435643?locale=en&utm_medium=social&utm_source=linkedin&utm_campaign=ql-social-share

Tools of the Trade: Linux and SQL

Master Linux and SQL tools to manage databases and ensure secure, efficient data operations.

Link: <https://www.coursera.org/account/accomplishments/records/BB4HBCTPN2WF>

Attract and Engage Customers with Digital Marketing

Leverage more sophisticated digital marketing strategies that can help drive interest and conversions.

Link: <https://www.coursera.org/account/accomplishments/records/WULEB4FE6U5R>

Ask Questions to Make Data-Driven Decisions

Develop your critical thinking and analytical skills to drive data-informed decisions.

Link: <https://www.coursera.org/account/accomplishments/records/PJI45L02VEPL>

Analyze Data to Answer Questions

Apply data analysis tools to answer complex questions, and provide actionable insights to drive decisions.

Link: <https://www.coursera.org/account/accomplishments/records/JA9TUJCC8O0D>

Start the UX Design Process: Empathize, Define, and Ideate

Learn user-centered design techniques to create impactful user experiences.

Link: <https://www.coursera.org/account/accomplishments/records/RYO4FHVHO06D>

Implement Load Balancing on Compute Engine

Learn to enhance system performance with load balancing solutions on Google Cloud.

Link: https://www.cloudskillsboost.google/public_profiles/fa3a9f9e-63f7-49da-81ed-0eb397f21f77/badges/13427454?locale=en&utm_medium=social&utm_source=linkedin&utm_campaign=ql-social-share

Google Data Analytics Capstone: Complete a Case Study

Apply data analytics skills to real-world projects and complete an in-depth case study.

Link: <https://www.coursera.org/account/accomplishments/records/STQGPDW05BV>

Google Cloud Computing Foundations: Networking & Security in Google Cloud

Learn networking and security basics in order to build a secure cloud infrastructure.

Link: https://www.cloudskillsboost.google/public_profiles/fa3a9f9e-63f7-49da-81ed-0eb397f21f77/badges/13404822?locale=en&utm_medium=social&utm_source=linkedin&utm_campaign=ql-social-share

Google Cloud Computing Foundations: Infrastructure in Google Cloud

Understand the basics of cloud infrastructure including deployment and resource management.

Link: https://www.cloudskillsboost.google/public_profiles/fa3a9f9e-63f7-49da-81ed-0eb397f21f77/badges/13390688?locale=en&utm_medium=social&utm_source=linkedin&utm_campaign=ql-social-share

Google Cloud Computing Foundations: Cloud Computing Fundamentals

Understand the basics of cloud computing, including virtualization and cloud services.

Link: https://www.cloudskillsboost.google/public_profiles/fa3a9f9e-63f7-49da-81ed-0eb397f21f77/badges/13375554?locale=en&utm_medium=social&utm_source=linkedin&utm_campaign=ql-social-share

Foundations of User Experience (UX) Design

Learn UX design principles to create intuitive and user-friendly digital experiences.

Link: <https://www.coursera.org/account/accomplishments/verify/U1EQ1F6HZ1I3>

Design a User Experience for Social Good & Prepare for Jobs

Create impactful UX designs for social causes while preparing for a UX career.

Link: <https://www.coursera.org/account/accomplishments/records/Q6AEMQA7GGEG>

Create High-Fidelity Designs and Prototypes in Figma

Develop intelligent, fully-featured User Interfaces; prototype in Figma.

Link: <https://www.coursera.org/account/accomplishments/verify/1YNA0EQUIU63M>

Conduct UX Research and Test Early Concepts

Perform user research and conduct usability testing to improve and refine the design ideas.

Link: <https://www.coursera.org/account/accomplishments/records/2Q8VROON3JT1>

Build a Secure Google Cloud Network

Build and implement functional network designs and architectures through Google Cloud tools.

Link: https://www.cloudskillsboost.google/public_profiles/fa3a9f9e-63f7-49da-81ed-0eb397f21f77/badges/13435579?locale=en&utm_medium=social&utm_source=linkedin&utm_campaign=ql-social-share

Build Wireframes and Low-Fidelity Prototypes

Develop wireframes and prototypes to visualize, and iterate on, concepts of designs.

Link: <https://www.coursera.org/account/accomplishments/verify/KYT9L9921CJU>

Build Dynamic User Interfaces (UI) for Websites

Create responsive, dynamic UIs for websites using current web development tools.

Link: <https://www.coursera.org/account/accomplishments/verify/4YHZZE58492V>

Share Data Through the Art of Visualization

Create impressive data visualization using modern tools to communicate effectively.

Link: <https://www.coursera.org/account/accomplishments/records/FONAUYXXUYVN>

Foundations of Digital Marketing and E-commerce

Understand the key concepts of digital marketing and e-commerce for online success.

Link: <https://www.coursera.org/account/accomplishments/records/TBMJB49O0415>

Play It Safe: Manage Security Risks

Learn how to identify, assess, and mitigate cybersecurity risks to protect digital assets appropriately.

Link: <https://www.coursera.org/account/accomplishments/records/0PR3RQXD6W5H>

Put It into Practice: Prepare for Cybersecurity Jobs

Gain practical skills in cybersecurity, including threat analysis and system protection in preparation for industry roles.

Link: <https://www.coursera.org/account/accomplishments/records/DU0EQE9SPWDV>

Sound the Alarm: Detection and Response

Learn advanced techniques to detect and respond to cybersecurity incidents in real time.

Link: <https://www.coursera.org/account/accomplishments/records/0OI7SXII9BJW>

Fundamentals of Digital Marketing and E-Commerce

Learn to understand the principles of Digital Marketing and e-commerce foundational concepts that attract, engage, and retain customers.

Link: <https://www.coursera.org/account/accomplishments/records/I61LSYLNHNZK>

Fundamentals of Cybersecurity

Get foundational knowledge of the basic concepts, tools, and methodologies that form the basis of cybersecurity to protect systems.

Link: <https://www.coursera.org/account/accomplishments/records/PSK4TGJHVZK9>

Connection and Protection: Networks and Network Security

Learn network security principles and get hands-on experience on robustness testing of network infrastructures by practicing computer-related ethical network procedures.

Link: <https://www.coursera.org/account/accomplishments/records/S5IIGKB34XS7>

Automate Cybersecurity Tasks with Python

Use Python to automate such cybersecurity tasks as processing the records data; detecting threats; performing OS checking and monitoring.

Link: <https://www.coursera.org/account/accomplishments/records/2N9X3JWIH6DD>

Attract and Interact with Customers Through Digital Marketing

Learn how to attract and engage customers by using SEO, content marketing, and social media.

Link: <https://www.coursera.org/account/accomplishments/records/WT8GKQDRPRQJ>

Assets, Threats and Vulnerabilities

Identify key assets, assess threats, and address vulnerabilities to strengthen security protocols.

Link: <https://www.coursera.org/account/accomplishments/records/GOKHPAHWJHHE>

Satisfaction Guaranteed: Develop Online Customer Loyalty Strategies

Design effective loyalty strategies to improve customer retention and satisfaction in e-commerce.

Link: <https://www.coursera.org/account/accomplishments/records/HRF7WW5W3QGJ>

Evaluate for Success: Marketing Analytics and Measurement

Learn how to analyze and measure marketing efforts for better performance using data-driven approaches.

Link: <https://www.coursera.org/account/accomplishments/records/W4PTTIF7572G>

From Likes to Leads: Engage with Customers Online

Turn social media interactions into tangible leads with the help of engagement techniques that have been tried and tested.

Link: <https://www.coursera.org/account/accomplishments/records/JIL8IHA55I71>

Creativity In the Inbox: Email Marketing

Learn how to leverage e-mail marketing to create effective campaigns that drive customer engagement.

Link: <https://www.coursera.org/account/accomplishments/records/N1F79H2WUPJ2>

Get the Sale: Create, Launch, and Manage eCommerce Stores

Learn to design, launch, and manage e-commerce stores to ensure better sales.

Link: <https://www.coursera.org/account/accomplishments/records/K9DBQ5U2S5Y6>

Treatment Plant Management and Use of the Reverse Osmosis System

Certification that I can operate a complete wastewater treatment plant with an equalization tank, biological selector, biological reactor, dissolved air flocculation system, filter press, multimedia filters, and a reverse osmosis system.

NOM-026-STPS-2008 Colors and Safety and Hygiene Signs

Certification of having received and passed the online course for the previously described standard. This course is offered by the Mexican federal government through the PROCADIST website.

NOM-019-STPS-2011 Health and Safety Commissions

Certification of having received and passed the online course for the aforementioned standard. This course is offered by the Mexican federal government through the PROCADIST website.

NOM-017-STPS-2008 Personal Protective Equipment - Selection, Use, and Handling in the Workplace

Proof of having received and passed the online course for the previously described standard. The course is offered on the website of the RELCE EMPRESARIAL organization. The website includes information about the instructor, course duration, and grade.

NOM-026-STPS-2008 Safety and Hygiene Colors and Signs

Proof of having taken and passed the online course for the previously described standard. Course offered on the website of the RELCE EMPRESARIAL organization. The website includes information about the instructor, course duration, and grade.

Research. Discovering Facts and Principles

Certificate of completion of the described course. This course was taken online on the MEXICO X website.

INNOVATIC 2.0

Certificate of completion of the described course. This course was taken online on the MEXICO X website. This course is relevant to the field of research and development, as it teaches different methods for generating new ideas.

Sustainable Development, Our Shared Future

Certificate of completion of the described course. This course was taken online on the MEXICO X website. This course demonstrates the different ways to reduce the environmental footprint.

Strategic Planning, a Strategic Decision for Your Life

Certificate of completion of the described course. This course was taken online on the MEXICO X website. This course demonstrates mechanisms for planning achievable and relevant objectives that can be used at various levels outside of the workforce.

Probability and Statistics

Certificate of having completed the described course. Said course was taken online on the MEXICO X website.

Arithmetic and Algebra Principles

Certificate of completion of the course described. This course was taken online on the MEXICO X website.