

RODRIGO ESCAMILLA

Biotechnology Engineer | Operations Analytics and Process Improvement

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Mexican, French (EU) and U.S. national | Open to roles in the U.S., Mexico and Switzerland



PROFILE

Biotechnology engineer with a full year of international industry experience turning technical and operational data from many sites into decisions. At CEMEX in Switzerland, ran a recurring evaluation program across a network of more than 40 plants, covering comparison methodology, data validation, statistical benchmarking, root cause reviews and corrective actions agreed with local managers, supported by a Power BI platform reaching 60+ plants. Now holds an independent operations and analytics mandate at a B2B distributor, covering ERP profitability analysis and a customer ordering portal taken to production. Earlier, ran warehouse and logistics operations for the same distributor, including the implementation of ERP and CRM systems from a blank page. Degree combined experimental design and statistics with full process design: mass and energy balances, equipment sizing, quality, regulation and economic evaluation.

CORE SKILLS

Operations and process improvement: Coordination of programs across large plant networks; root cause analysis and corrective action follow up; process standardization and documentation; inventory, warehousing and delivery routing; continuous improvement
Data and analytics: Power BI dashboards, KPI and scorecard design; advanced Excel and Power Query; statistical benchmarking, outlier detection and data quality controls; Minitab; Python (basic)
Quality and reliability: Interlaboratory proficiency testing and benchmarking methodology; validation and quality planning; protocols, work instructions and technical reports; laboratory testing to standard methods
Engineering and technical: Bioprocess and process design; mass and energy balances; equipment sizing and scale up; experimental design; materials characterisation (XRF, XRD, TGA/LOI, PSD, compressive strength)
Systems and business: ERP (MASadmin) and CRM (Monday.com) implementation and adoption; CAPEX/OPEX and NPV/IRR modeling; AI assisted research, drafting and coding tools; communication with technical and senior stakeholders

EXPERIENCE

CEMEX Global Operations & Technology

Feb 2025 - Feb 2026

Operations Analytics & Performance Reliability Intern (full time, one year) | Brugg, Switzerland

- Ran a complete analytical reliability evaluation program across a network of more than 40 plants: designed the comparison methodology, coordinated sample distribution and results collection on a fixed calendar, validated incoming data, and reported back to every participating site.
- Built the data quality controls, outlier detection and statistical benchmarking that made comparisons between plants defensible enough to support operational decisions.
- Designed and delivered a Power BI platform covering 60+ plants, converting technical data from many sources into comparative views used for trend analysis and transfer of better practice across the network.
- Investigated why sites deviated from expectation, covering calibration and verification gaps, procedure variance, equipment condition and sample preparation, and agreed corrective actions with local laboratory and plant managers, following them through to closure.
- Authored technical reports and harmonized methods and work instructions across the network, presenting findings to technical and senior audiences in an organization of 20+ nationalities.

ESGO Proveedores S.A. de C.V.

Jan 2022 - Dec 2024 · Aug 2026 - Present

Operations & Commercial Analytics Lead, Aug 2026 - Present | Santa Catarina, N.L., Mexico

- Turned 8,149 ERP transactions into one source of truth for a B2B distributor, with profitability by client and segment.
- Specified and shipped a B2B ordering portal now in production across 771 products: contract pricing, automated CFDI invoice ingestion, statements, scheduled orders and a multi property view for administrators. Directed AI assisted development throughout.
- Built a prospecting engine on the INEGI DENUCE census, ranking 211,349 units into 25,038 qualified prospects and surfacing 144 unserved sites of existing customers; launched the public site, lead CRM and paid search behind it.

Warehouse Supervisor & Operations Lead (part time during studies), Jan 2022 - Dec 2024

- Managed inventory across 750+ SKUs and delivery routing, and implemented the ERP (MASadmin) and CRM (Monday.com) from a blank page, configuring product, supplier, client and tax records and driving adoption across the team.

PROJECTS

Bioprocess Design and Scale Up Capstone: microbial enzyme and spore product

2026

Tecnologico de Monterrey | team of five

- Designed a complete industrial bioprocess covering fermentation, downstream processing, formulation, mass and energy balances, equipment sizing, plant layout, quality and validation planning, and analyzed the regulation applicable in Mexico and Europe.
- Built the CAPEX/OPEX and NPV/IRR model across three scenarios that underpinned the design, and defended the work to a faculty panel.

Amino Acid Biostimulation Trial: Coriander Microgreens

Aug - Dec 2023

Tecnologico de Monterrey | client project with City Root Farms S.A. de C.V.

- Designed, ran and statistically analyzed a controlled treatment trial for an external client, reporting a 4% improvement in stem growth and 13% in germination rate, and translated the results into conclusions for the client.

EDUCATION

Tecnologico de Monterrey: B.S. in Biotechnology Engineering

Aug 2021 - Jun 2026

Monterrey, Mexico | GPA 3.7/4.0 (final grade 90.25/100) | Experimental design and statistics, bioprocess engineering, data analysis, quality, safety and regulation

ADDITIONAL INFORMATION

Languages: Spanish (native); English (fluent / C1, TOEFL iBT 107/120); French (A2, improving)

International: One year living and working in Switzerland; PLEI International Entrepreneurial Leadership Programme, Japan (2024)

Work authorization: U.S. citizen, also French (EU) and Mexican national; eligible to work in the U.S., the EU/EFTA and Mexico.