

Zeryán Guerra

Mining Operations Engineer

Contact

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Location: La Serena, Chile (Available to move to any national or international location)

Summary

Experienced Mining Engineer with 10+ years in project development and management across various industries, including mining, construction, and renewable energy. Proven ability to manage large-scale projects (US\$150M/year) on time and within budget using data-driven approaches. Passionate about leveraging technology like AI and computer vision for project optimization. Seeking a challenging role in underground mining or power plant construction to contribute to project success and business growth through operational excellence and cutting-edge technology implementation.

Skills

Contract Management: Extensive experience in tender management, subcontractor payment management, dispute resolution, and contract closing.

Cost Control: Strong understanding of project cost estimation, budgeting, and control techniques. Expertise in analyzing contractor reports to estimate daily construction costs and progress.

Technical Expertise: In-depth knowledge of underground mining and construction projects, including mining and construction methods, equipment, and safety procedures.

Data Analysis: Proficient in data analysis and reporting using Python and MS Excel, utilizing data to track project progress, identify trends, and make informed decisions.

Technology Integration: Actively exploring and implementing cutting-edge technologies like generative AI and computer vision to enhance project management processes.

Communication and Leadership: Excellent communication and interpersonal skills, with proven ability to lead and motivate teams.

Advanced english level. Used to work with english as first language. **TOEFLS 100/120** (reading:29; listening:24; speaking:23; writing:24. Taken on 2020.03)

Work Experience

Period: 2024.01 to Date

Position: Cost Engineer

Company: **Powerchina** Huadong Engineering Corporation
Agencia en Chile.

Project: Various PV Construction Projects

Location: Chile and Colombia

My Team: Remote supervision on 1 engineer in Colombia, 3 jr. engineers in Chile.

Description: As part of Business Development Team, I am conducting unit cost analyses, aligning them with strategic planning, and developing business proposals for tenders in Chile and **Colombia**. My responsibilities encompass overseeing recruitment, machinery, procurement, and logistics, ensuring they align with market trends and our long-term objectives.



Period: 2022.03 to Date

Position: Subcontractor Manager

Company: **Powerchina** Huadong Engineering Corporation,
Agencia en Chile.

Project: 480MW **CEME1 PV Plant**, Substation and 9,2km OHL
Construction Project

Location: María Elena, Región de Antofagasta. Chile.

Budget: ~ US\$ 380 millions

My Team: 8 administratives, 3 engineers and 1 lawyer, overseeing up to 81 subcontracts, 380 supply contracts and 1200 subcontracted workers on site at peak, totalizing more than 3000 historically accredited workers along 2 years.

Description: I oversee the work of Subcontractors all along the Project, ensuring they fulfill their contractual obligations



and that the Contractor meets its subcontracting duties. My responsibilities include selecting approved Subcontractors, obtaining Owner's consent, and acting as the main contact for Subcontractor issues. I manage, supervise, and pay Subcontractors, ensuring their work and equipment adhere to the Contract and HSE standards. Additionally, I handle contractual claims, draft correspondence, and manage subcontract terminations and closures. Currently **Delivering to Client**

Period: 2021.09 to 2022.02

Position: [Site Support Engineer](#)

Company: **Admiral** HR Consulting (by ENEL Green Power)

Project: 161MW [Sol de Lila](#) PV Plant, Substation and 4km Overhead Line Construction

Location: Peine, Región de Antofagasta. Chile.

Budget: ~US\$ 130 millions

Description: I was in charge of analysis of incoming main contractor reports, which I used to estimate and report upstream about daily construction cost and progress, as of engineering, materials delivery, permitting, quality compliance and energization progress. In practice, my tasks were a mixture of data engineering and contract management.



Period: 2021.03 to 2021.08

Position: [Technical Unit Manager](#)

Company: **BESALCO Energía Renovable S.A.**

Project: 154/23kV [Pueblo Seco Substation](#) and 2km Overhead Line Construction

Location: Pueblo Seco (Chillán), Región de Ñuble. Chile.

Budget: ~US\$ 4 million

My Team: 2 engineers, 4 administratives

Description: Starting COVID19 period, I assumed as Technical Unit Manager during the civil and mechanical construction phases of the Pueblo Seco Substation, I held a multifaceted leadership role envisaging, strategic

development, collaboration with supervision and quality control, and comprehensive progress reporting of the Construction Plan and Budget. I spearheaded the subcontractor tender process, ensuring the selection of proficient partners to meet project milestones. I adeptly managed commercial contracts, overseeing negotiations, and maintaining robust relationships with vendors and stakeholders to facilitate smooth project delivery.



Period: 2019.03 to 2021.02

Position: [Technical Unit Engineer](#)

Company: **BESALCO Energía Renovable S.A.**

Project: 20MW [Digua Dam Hydropower Plant](#)

Location: Parral, Región de Ñuble, Chile.

Budget: ~\$US\$ 24 millions

Description: In my role, I managed the execution of construction and business plans, from selecting subcontractors to mobilizing resources and verifying engineering drawings for technical compliance. I also handled commercial contracts, ensuring budget adherence and project specifications. Starting with the manual excavation in March 2019, I transformed the Digua Dam from an old farming infrastructure into a 20MW power plant. This involved channeling pressurized water through a 500m tunnel to 10MW Francis Turbines and installing valves to manage water pressure and protect existing structures.



Period: 2017.09 to 2019.02

Position: [Business Development Engineer](#)

Company: **SAME Ingeniería S.A.**

Description: In my role, I actively participated in site reconnaissance visits, conducted thorough problem analysis and modeling, and designed basic solutions to address identified issues. I was responsible for project cost estimation, proposal development, accreditation and mobilization of resources to the site, and seamless

contract management. I attended some company flagship contractual issues.

Projects:

- Computational simulation and engineering design for an [Assisted Natural-Secondary Ventilation System](#) for Spence Electrowinning Plant of **BHP Billiton**.
- Supply of [Acid Mist Control Systems](#) for Escondida Electrowinning Plant of **BHP Billiton**
- Engineering service closing, consisting in the design of a [Molybdenum Blast Furnace Gases Control System](#) for **Molyb - CODELCO**



Period: 2015.03 to 2017.07

Position: [Technical Unit Manager](#)

Company: **AP Constructiones SpA.**

Projects:

- Construction of Hydropower Plant Intake: Excavation and CivilWorks, for **Generadora HidroÑuble**. San Fabián de Alico, Chile. (US\$ ~5 million).
- Slope Stabilization in Route-5 Highway near to Angostura Tall Construction for **Ferrovial**. Angostura, Chile. (US\$ ~1 million).
- Excavation and Stabilization of Metro Interconnection Tunnel of Metro Franklin for **Ferrovial**. Santiago, Chile (US\$ ~2 million).



Description: During my tenure, I successfully expanded company sales by eightfold. My responsibilities included business development, engineering reviews, planning, costing, proposal development, client negotiations, and contract reviews. I also managed mobilization, accreditation, construction progress, payment collections, claims, and contract closures. I ensured precise and efficient execution of every stage of the project lifecycle.

Period: 2014.01 to 2014.12

Position: [Chief of Underground Mining Operations](#)

Company: **Can-Can** Mining Company (COPEC Mining Subsidiary)

Project: El Bronce de Petorca Gold Mine
Location: Petorca, Región de Valparaíso. Chile.
Budget: ~\$US\$ 23 millions
My Team: 3 supervisors, 12 foreman, 200 direct mining workers
Description: In my most pivotal operations role, I was responsible for supervising all underground mining operations to meet a daily production goal of approximately 2,500 tonnes of high-grade gold ore. I executed short-term mining plans by overseeing drilling, blasting, loading, hauling, and unloading of ore and waste. This role provided me with extensive expertise in managing underground mining operations and a profound understanding of both worker and machinery requirements. I leveraged this knowledge to optimize operational efficiency and ensure the successful achievement of production targets.



Period: 2013.02 to 2013.12
Position: [Technical Unit Engineer](#)
Company: **Trepsa - CerroAlto Consortium**
Project: Prestripping and 1st Stage Mining of Rajo Sur, El Teniente, **CODELCO**.
Location: Sewell (Mina El Teniente), Región de O'Higgins. Chile.
Budget: ~\$US\$ 130 millions
Description: In my role, I was responsible for analyzing machinery reports and estimating total project costs and revenues in alignment with the company's asset management-focused methodology, specifically utilizing ASARCO KPIs. Additionally, I monitored physical progress, managed costs, and assessed machinery performance for the Consortium. This project provided me with valuable insights into CODELCO's operations, particularly through the initiation of open-pit operations at the El Teniente Mine.



Period: 2011.12 to 2012.12
Position: [Chief of Mines](#)
Company: **CEMIN** Mining Holding

Location: Chañaral, Región de Atacama. Chile.

Budget: ~\$US\$ 5 millions

Description: Following the closure of the mine by SERNAGEOMIN due to a severe accident, I was hired to design and implement a comprehensive Health, Safety, Environment, and Operations Management System to reactivate mining operations. Once we successfully reacquired the necessary working permits, I took charge of gold mine prospecting and mining activities. My efforts resulted in achieving a production target of 12,000 tonnes per month from 5 different mines, which was then delivered to the Falda Verde Cyanidation Plant, a company-owned processing facility located in Chañaral Bay.



Period: 2010.04 to 2011.06

Position: Technical Unit Engineer

Company: **Chamuscada** Mining Company

Location: Canela Baja, Región de Coquimbo. Chile.

Budget: ~\$US\$ 2 millions

Description: I was responsible for overseeing the ENAMI Drilling Exploration Project. Following successful discoveries, I managed the permit acquisition, mine reactivation, and mining operations, culminating in the production of high-grade gold concentrates through mineral processing.



Period: 2009.02 to 2010.03

Position: Technical Unit Assistant

Company: **Antolín Cisternas** and Company S.A.

Projects:

- Tunnel stabilization with shotcrete on **Carmen and Margarita Mines**, for **Minera Las Cenizas**. Cabildo, Chile.
- Tunnel excavation and stabilization on Papomono Mine, for **Minera Vale**. Illapel, Chile.
- Slope stabilization in Los Pelambres Facilities, for **Antofagasta Minerals**. Salamanca, Illapel.

Description: Reporting directly to the Project Manager, I began by analyzing machinery and work reports to control costs and monitor progress. Over time, my responsibilities expanded to include payment processing, resolving contractual disputes, cost estimation, and general planning and contract management.



Graduate Studies

Period: 2009.03 to 2011.12

Studies: [Applied Mining Engineer](#)

Institution: University of La Serena

Location: La Serena, Región de Coquimbo, Chile.

Description: I possess a strong foundation in mining and metallurgical operations management, complemented by a multidisciplinary education designed to promote a holistic understanding of mining project development and management skills. I pursued this advanced stage of studies while actively working on mining projects near my hometown, which provided invaluable insights for both my academic pursuits and professional growth.



Academic Background

Period: 2023.03 to 2023.08

Programme: **Data Science and Machine Learning: Making Data-Driven Decisions.**

Institution: **MIT Schwartzman College of Computing**

Description: This comprehensive 6-month course delves into Big Data Processing, Advanced Statistical Analysis, and Machine Learning Methods. Furthermore, it explores various applications of Artificial Intelligence, including Computer Vision and Generative AI. The course also covers practical applications relevant to my job profile, such as photovoltaic (PV) fault detection, Health, Safety, and Environment (HSE) machine learning protocols, and other industry-specific use cases. These advanced skills have allowed me to enhance



operational efficiency and safety standards within my professional setting.

Certificate: Can be verified here
<https://verify.mygreatlearning.com/verify/HAXXISXQ>

Period: 2016.03 to 2017.07

Programme: [Innomine Chile - Research in Germany Programme](#)

Institution: **Fraunhofer Institute** of Advanced Research

Location: Santiago, Chile. Various locations in Germany.

Description: Alongside 24 advanced researchers and cutting-edge technology developers, I participated in a joint applied research project with collaborators in Germany. After sharing our results, we arranged a tour to visit 13 Fraunhofer Research Centres, where we met in person, exchanged ideas, and forged stronger alliances aimed at developing innovative mining technologies with the support of German researchers. I was selected for this program due to my undergraduate research, which focused on enhancing the leaching of copper-gold bearing ores using cyanide solutions and hydrogen peroxide, yielding satisfactory results.



Period: 2010.07 to 2010.09

Programme: [2nd International Summer School for Mining Engineers.](#)

Institution: [Akademia Gorniczo Hurnitza](#)

a.k.a. University of Mining and Metallurgy. Krakow, Poland.

Location: Krakow, Poland

Description: For my exceptional academic performance and advanced English proficiency, I was awarded an international scholarship to travel to Krakow. During this 3-week field course, I participated in engaging lectures and hands-on laboratory sessions focused on coal, salt, quarry, and base metals mining in Poland. The program also included field visits to five operational mines, providing invaluable practical experience and insights into the mining industry.

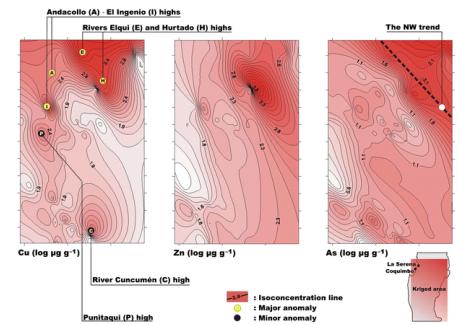


2010.03 to 2010.06

Applied Geochemistry for Environmental Impact Assessment and Mineral Exploration.

University of Castilla-La Mancha (Spain) & University of La Serena (Chile).

Highlights: During this 3-months Field Course, we learn how to design and execute sampling campaigns and how to use Kriging Method to unveil hidden patterns on stream sediments in Coquimbo Region. We discovered that concentrations of heavy metals like copper, zinc and arsenium are not driven by mining activity in the area, but controlled by geological formations rich in those metals. Main mining projects in the region are located in these geologically interesting areas, resulting in a false causality between mining activity and heavy metals concentrations in soil and surface waters.



Period: 2010.03 to 2010.06

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Institution: **University of Castilla-La Mancha (Spain) & University of La Serena (Chile).**

Location: Punitaque, Region de Coquimbo, Chile.

Description: During this 3-months Field Course, we learn how to design and execute sampling campaigns and how to use Kriging Method to unveil hidden patterns on stream sediments in Coquimbo Region. We discovered that concentrations of heavy metals like copper, zinc and arsenium are not driven by mining activity in the area, but controlled by geological formations rich in those metals. Main mining projects in the region are located in these geologically interesting areas, resulting in a false causality between mining activity and heavy metals concentrations in soil and surface waters.

