

# Luiz Resende Silva

*Mining Engineer, M.Eng.*

## CONTACT

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📺 [live:luizaugusto7](https://live.twitch.tv/channel/luizaugusto7)

🌐 [luiz-resende](https://github.com/luiz-resende)

## TECHNICAL SKILLS

Python ● ● ●

C++ ● ● ●

Java ● ● ●

CPLEX ● ● ●

Gurobi ● ● ●

Office ● ● ●

AutoCAD ● ● ●

SGeMS ● ● ●

Studio RM ● ● ●

GEOVIA Whittle ● ● ●

## LANGUAGES

PORTUGUESE  
Native (Brazilian)

ENGLISH  
Proficient (C2 Level)

FRENCH  
Beginner (A1 Level)

## PERSONAL SKILLS

Communication

Dedication

Listening

Organization

Reliability

Teamwork

*Over 4 years of experience with data analysis, coding and programming, optimization packages and machine learning techniques. Familiar with demanding environments and comfortable with individual and group work.*

## ACADEMIC FORMATION

- MAY 2021 ● POLYTECHNIQUE MONTRÉAL  
PRESENT ● *Doctor of Philosophy (Ph.D.) in Mathematics – Engineering Mathematics*
- Research: Optimizing operations in open-pit mines using Constraint Programming (CP) for short-term planning.
  - Courses: Discrete Optimization; Stochastic Optimization; Quantitative Risk Management Using Robust Optimization; Scheduling Theory; Reinforcement Learning.
  - Complementary Training: Handling of Scientific and Technical Information; Creative Approaches to Research.
- SEP 2018 ● MCGILL UNIVERSITY  
AUG 2020 ● *Master of Engineering (M.Eng.) in Mining Engineering*
- Topics: Mine Planning; Simultaneous Stochastic Optimization of Mining Complexes; Stochastic Orebody Modelling; Data Science & Machine Learning.
  - Thesis: Risk analysis and performance improvement for simultaneous stochastic optimization in a copper mining complex.
- SEP 2014 ● UNIVERSITY OF TORONTO  
MAY 2015 ● *Undergraduate Exchange Program in Mineral Engineering - Fall/Winter*
- AUG 2010 ● FEDERAL UNIVERSITY OF MINAS GERAIS  
JUL 2016 ● *Bachelor of Applied Science (BASc) in Mining Engineering*

## PROFESSIONAL EXPERIENCES

- OCT 2017 ● EMATER-MG  
JUL 2018 ● *Engineering Technical Advisor – Belo Horizonte, Brazil*
- Conducted environmental, geological, and topographical characterization studies; Performed productive environmental zoning (ZAP) surveys and reports for the sustainable use of natural resources; Designed groundwater usage plans.
- MAY 2015 ● FISHER ENGINEERING LTD.  
AUG 2015 ● *Engineering Internship – Markham, ON*
- Performed Environmental Site Assessment (ESA) Phases I & II investigations and reports; Managed drilling campaigns for sample acquisition and hydrogeological investigations; Conducted soil and groundwater remediation procedures for ESA Phase III.

## SCHOLARSHIPS & AWARDS

- SEP 2018 ● COSMO STOCHASTIC MINE PLANNING LAB. | MCGILL UNIVERSITY  
AUG 2020 ● *COSMO Laboratory Scholarship for Master's in Engineering*
- *Graduate Excellence Award*
- MAY 2021 ● DEP. MATHEMATICS AND INDUSTRIAL ENG. | POLYTECHNIQUE MONTRÉAL  
AUG 2023 ● *Ph.D. Scholarship for Automation and Optim. of Operations in Open-Pit Mines*
- *CREATE-NSERC Scholarship – Intelligent and Autonomous Mines (IAM)*