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**Geotechnical Engineer**

**Expertise** Ground Control, Numerical Modeling, Blasting Engineering, Machine Learning

**Education** M.Sc. (Data Analytics and Decision Science), 2023  
RWTH Aachen University, Aachen, Germany

M.Sc. (Mining), 2015  
Universidad de Chile, Santiago, Chile

B.Sc. in Engineering (Mining and Extractive Metallurgy), 2012  
Universidad de Chile, Santiago, Chile

**Professional Experience**

2024 – Present ITASCA Germany, Gelsenkirchen, Germany  
Geotechnical Engineer

2022 – 2023 CoachAI, Artificial Intelligence and Computer Vision Team, Darmstadt, Germany  
Data Science Intern

2018 – 2023 ITASCA Chile, Santiago, Chile  
Geomechanics Consultant

2016 – 2018 Los Bronces Mine, Anglo American Chile, Chile  
Ground Control Engineer

2014 – 2016 El Soldado Mine, Anglo American Chile, Chile  
Ground Control Engineer

**Project Experience**

Slope Stability Analyses: Numerical modeling and assessments of slope stability using *FLAC3D* for open pit mines, including analysis of the probability of failure, determination of factors of safety, and analysis of time-dependent deformations (creep) in mines in Chile, Perú, and Brazil.

Blasting Engineering Projects: Optimization of blasting designs and minimization of blasting-induced damage in open pits in Chile and Perú using Blo-Up and data analytics.

Machine Learning Projects: Developed a surrogate model based on deep learning techniques for slope stability analyses in real time in slopes with two occurring geological structures.

Website: <https://pof-prediction.onrender.com/>