AMIR FARAMARZPOUR DARZINI

Mineral Processing Engineer

About Me

I truly enjoy finding solutions to challenging issues, especially when researching the intricate processes involved in mineral extraction. Making the mining industry greener than it has ever been is something else that interests me. I've demonstrated that I can think creatively, solve problems sustainably, and manage several projects at once. I'm amiable, adaptable, and a productive team player.

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Mining Eng, Yazd University,

linkedin.com/in/amirfaramarzpour

Google Scholar Profile

Date of birth

- July 02 1995

Language

- English (Business fluent)
- Farsi (Native)

Expertise

- Froth Flotation
- Python programing and machine Learning
- Mineral Surface analyzing
- PFD simulation and mass balancing
- Plant audit and sustainability
- Phosphate ore flotation

Experience

Research Assistant
Flotation Lab, School of Mining Eng, Yazd University
Sep 2023 - Present

- Partial assist on master student's thesis on DFT simulation of Magnetite nano particle adsorption on cerium (III) Nitrate surface.
- investigating lead carbonate mineral flotation separation
- developing machine learning model on forth flotation bubble size using python scikit-learn and opencv libraries.

Process control engineer
Bafgh Mining Company, Bafgh, Iran
Jul 2022-Aug 2023

- Geometallurgical modeling to predict ore behavior before entering the production lines.
- Simulation of comminution and classification of zinc ore (sphalerite) using Modsim .
- Crushing circuit evaluation and providing a solution to increase the capacity by 40%.
- Re-engineering of flotation cells through kinetic studies.
- Reducing the fluctuation of feed characteristics.
- Training the standard navigation of the flotation cell to operators.

Mandatory military service
Nov 2020 - May 2022

Internship
Chadormalu mining and industrial company
Oct 2019- Mar 2020

- Geometallurgical modeling in order to optimize mining operations and processing lines in the Chadormalu iron deposit

Master student
Flotation Lab - Yazd University
Sep 2017-Mar 2020

- Thesis title: Feasibility of iron and phosphate recovery from tailing dams of Esfordi phosphate complex (a case study)
- Modeling of tailing dams using Datamine software.
- Flowsheet design for iron concentrate recovery using high intensity magnetic separation.
- Defining optimum condition for recovering phosphate through flotation studies.
- Experimental design using Design Expert software.

Experience (...)

Bachelor student
Yazd University
Sep 2013-Sep 2017

- Project title: recovery of iron oxide minerals from tailing dams of Choghart Processing Plant using gravity and magnetic separation techniques (a case study)
- Defining optimum condition for magnetic separation from associated gangue minerals

Education

Yazd University

M.Sc. Mining engineering, mineral processing
Sep 2017 – Mar 2020

- Weighted grade avg: 17.54/20

Yazd University

Bachelor's Degree in Mining Engineering
Sep 2013 – Sep 2017

- Weighted grade avg: 14.08/20
- GPA of last three semesters: 15.25/20

Certifications

- **Python for Data Science and Machine Learning Bootcamp-** Udemy-2024 (Certificate URL)
- **The complete python bootcamp from zero to hero in python**- Udemy-2024 (Certificate URL)
- **HSE course,** Faculty of Chemical and Polymer Engineering, Yazd University, (2020)
- **HSC Chemistry course**, Faculty of mining and metallurgical Engineering, Yazd University, (2020)
- **X'pert HighScore course**, Yazd university Ceramic-Tile Research Center, (2019)

Technical skills

1. Molecular dynamics simulation (DFT Module) : **BIOVIA MATERIALS STUDIO software**.
2. Applied Data analysis and machine learning using **Python programming.**
3. Mineralogical image processing: **FIJI-Image J and Python libraries (OpenCV and TensorFlow).**
4. Thermodynamic calculations and mass balancing: **HSC Chemistry**.
5. Analyzing statistical data: **Minitab, pandas, Seaborn and scikit-learn libraries in python.**
6. Proficiency in **UV-Vis Spectrophotometry**.
7. PFD Simulation, and beneficiation circuit design : **MODSIM and Nia flow software**.
8. Designing and analyzing experimental layout: **Design Expert software**.
9. Analyzing XRD data for phase determination: **X'pert HighScore software.**
10. Block model statistical analysis: **Datamine & Leapfrog Geo softwares**.
11. Scientific plot sketching: **Origin/ Sigma plot/ Microsoft Office softwares.**
12. Teacher assistant for the **"Flotation"** course (one semester).
13. Member of the editorial board of **Kavosh Student Magazine**, Yazd University (since April 2019).

List of publications

1. Faramarzpour et al. "**Calcite in froth flotation - A review**", Journal of Materials Research and Technology, Volume 19, 2022, Pages 1231-1241, ISSN 2238-7854, Doi: https://doi.org/10.1016/j.jmrt.2022.05.106
2. **Phosphate Ore Processing by Flotation Method** , Yazd University publication, ISBN: 978-622-7353-65-5, (2021).

Awards and honors

- **Ranked 1st among Mining engineering graduate students (mineral processing), Yazd University, 2020**

References

- **Dr. Mohamad Reza Samadzadeh Yazdi from Yazd University**
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- **Dr. Khodakaram Gharibi from Yazd University**
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- **Dr. Hojat Naderi from Yazd University**
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