

# Amir Faramarzpour Darzini

Mineral Processing Engineer

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 [Google Scholar Profile](#)

Date of Birth: July 02 1995

## Education

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### ❖ Master's Degree - Mining engineering, mineral processing

**Yazd University**

Sep 2017 – Mar 2020

Thesis title:

- Feasibility of iron and phosphate recovery from tailing dams of Esfordi phosphate complex (a case study).
- Supervisor: [Dr. khodakaram Gharibi](#)

### Selected Courses:

- ✓ Rare-Earth Elements and Radioactive processing | **grade: 20/20.**
- ✓ Non-metallic Mineral Processing | **grade: 19.25/20.**
- ✓ Advanced Flotation | **grade: 19/20.**
- GPA: Weighted grade avg: 17.54/20.
- Ranked 1st among mineral processing graduate students, Yazd University, 2020.

### ❖ Bachelor's Degree- Mining Engineering

**Yazd University**

Sep 2013 – Sep 2017

Project title:

- recovery of iron oxide minerals from tailing dams of Choghart Processing Plant (Choghart iron deposit is located in central Iran) using gravity and magnetic separation techniques (a case study).
- Supervisor: [Dr. Hojat Naderi](#)
- GPA: Weighted grade avg: 14.08/20, GPA of last three semesters: 15.25/20.

### ❖ University Ranking:

- National - 25th (EduRank 2023)
- Global - 1201-1500th (THE World University Rankings 2025)

## Publication

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- 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>
- **Phosphate Ore Processing by Flotation Method**, Yazd University publication, ISBN: 978-622-7353-65-5, (2021).
- **Recovery of valuable phosphate mineral from tailing dams of Esfordi phosphate processing plant through flotation studies (in Farsi)**, 8th Iranian Mining Engineering Conference, 803-810, 2020.

## Skills

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<b>Programming</b>	<ul style="list-style-type: none"><li>▪ Python</li><li>▪ SQL</li></ul>
<b>Technical Software</b>	<ul style="list-style-type: none"><li>▪ Data science and machine learning (NumPy, pandas, Seaborn, Matplotlib, SciPy, scikit-learn python libraries)</li><li>▪ BIOVIA Materials Studio</li><li>▪ FIJI-Image J, OpenCV-python</li><li>▪ Minitab</li><li>▪ MODSIM</li><li>▪ Design Expert</li><li>▪ X’pert High Score</li><li>▪ Datamine &amp; Leapfrog Geo</li><li>▪ Origin/ Sigma plot/ Microsoft Office</li></ul>
<b>Personality</b>	<ul style="list-style-type: none"><li>▪ Teamwork</li><li>▪ Leadership</li><li>▪ Communication</li><li>▪ Easily Adaptable</li><li>▪ Presentation</li></ul>
<b>Languages</b>	<ul style="list-style-type: none"><li>▪ English (fluent)</li><li>▪ Persian (native)</li></ul>
<b>Other</b>	<ul style="list-style-type: none"><li>▪ Linux</li></ul>

## Research interests:

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- ✓ Utilizing the machine learning algorithms in mineral processing plants.
- ✓ Implementation computer vision in mineral processing.
- ✓ Froth flotation of REE minerals.
- ✓ Li-ion battery recycling.
- ✓ Sustainable metallurgy
- ✓ Environmental sustainability
- ✓ complex ore separation using conventional and novel techniques.

## Certificates

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- ✓ 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 High Score course, Yazd university Ceramic-Tile Research Center, (2019)

## Experience

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### Research Assistant

#### Flotation Lab, School of Mining Eng, Yazd University

September 2023 - Current

- 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
- Participated actively in regular meetings with fellow researchers to discuss project updates, challenges faced, and lessons learned during ongoing activities.
- Conducted literature reviews to support hypothesis development and identify gaps in existing knowledge.
- Conducted extensive literature reviews to support ongoing research projects, significantly expanding team's knowledge base.
- Coordinated with external research partners to ensure seamless integration of collaborative projects.

### Process control engineer

#### Bafgh Mining Company Bafgh, Iran

July 2022 - August 2023

- Enhanced product quality with rigorous testing and analysis of process data.
- Presented technical findings to management, providing actionable insights for informed decision making.
- Designed training programs for new engineers, fostering a culture of continuous learning and development.
- Collaborated on multidisciplinary teams to identify areas for process improvement and cost reduction.
- Analysed historical process data to identify trends and opportunities for improvement in efficiency or quality metrics.
- Developed custom software tools, streamlining work processes and increasing productivity.
- Geometallurgical modelling to predict ore behaviour 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.
- Reviewed processes, identifying areas requiring improvement.

### Compulsory Military Service

November 2020 - May 2022

### Internship

Chador Malu mining and industrial company

October 2019 - March 2020

- Geometallurgical modelling to optimize mining operations and processing lines in the Chador Malu iron deposit
- Gained valuable experience working within a specific industry, applying learned concepts directly into relevant work situations.
- Supported staff members in their daily tasks, reducing workload burden and allowing for increased focus on higher-priority assignments.

## References

- **Dr. Mohamad Reza Samadzadeh Yazdi from Yazd University**

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- **Dr. Khodakaram Gharibi from Yazd University**

Email: khgharibi@yazd.ac.ir Phone: +9803531232589

- **Dr. Hojat Naderi from Yazd University**

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