

EDUCATION

Kharazmi University, Faculty of Earth Sciences

Tehran, Iran

Bachelor of Science, Geology

2021 – 2025

- Chairperson, Geological Society of Kharazmi University (June 2024 - Present)
- Vice President of Media, Geological Society of Kharazmi University (November 2023 - June 2024)
- Ranked 8th out of 60 students in the Undergraduate Studies

TEACHING & WORK EXPERIENCE

Kharazmi University

Tehran, Iran

Teaching Assistant

April 2025 - current

- Programming Course, Under Supervision of Dr. Morteza Asemani

FEZtool

Tehran, Iran

Co-Founder & Research and Development Specialist

August 2023 - current

- Developed advanced algorithms to support research and analytical processes
- Conducted in-depth geospatial data analysis for environmental and spatial insights
- Led research initiatives in Earth sciences to drive innovation and scientific understanding

Young Scholars Club (YSC)

Tehran, Iran

Instructor

July 2024

- Teaching Data Science for the Iran National IESO 2024 Team

Kharazmi University

Tehran, Iran

Instructor

April 2024 - June 2024

- Organized and instructed the Advanced Python and Machine Learning Workshop

ARYANIC

Tehran, Iran

Project Manager

November 2022 - June 2023

- Worked on a project called Business Factory and managed a team of 7.

GreenOly

Tehran, Iran

Product Manager

August 2022 - January 2023

- Created an Entrepreneurship MOOC with Olympiad Medalists.

HONORS & AWARDS

LeetCode Global Ranking — *Ranked Top 100*, LeetCode 2025

Deep-ML Global Leaderboard — *Ranked Top 10*, Deep-ML.com 2025

Hydro 2024 Research-Oriented Summer School - *Full Scholarship*, University of Lille 2024

Master's Entrance Exam (Geophysics) - *Ranked 11th Nationwide* 2024

Geological Society Logo Design Contest - *Winner*, Kharazmi University 2024

Research Visit Grant (2500 DKK) - *Awardee*, University of Copenhagen 2022

DrCT 2021 Global Computational Competition - *Gold Medalist* 2021

1st national Thinking & Entrepreneurship Olympiad (ITEO) - *Silver Medalist* 2020

WMI 2015 World Mathematical Championships Selection - *Silver Medalist* 2015

PUBLICATIONS

Journal Articles

1. Farmahini Farahani, M. (2024). Effects and social damage of fine dust. *Ovan Scientific Journal*

2. **Farmahini Farahani, M.** (2024). Designing the green belt in the southwest of Zahedan. *Ovan Scientific Journal*
3. Saravani, M. J., Kashef, S., **Farmahini Farahani, M.**, Kashefi, M., & Zohreh, M. (2023). Investigating the accuracy of hybrid models with wavelet transform in the forecast of watershed runoff. *Journal of Water Management Modeling (JWMM)*

Conference Papers

1. Rezaei, K., & **Farmahini Farahani, M.** (2024, March). Visualization of magnetometric data with Python (case study: Segregation sedimentary units of Torud Playa). In *The 1st Conference on Applied Geophysics in Mines*, Tehran, Iran
2. Rezaei, K., & **Farmahini Farahani, M.** (2024, February). Comparing the performance of the k-means clustering method and spectral indices in characterizing land use and land cover using remote sensing with Python (case study: Landsat 8 multi-spectral images). In *2nd International Conference for Iranian Geography and Earth Sciences Students*, Tehran, Iran
3. **Farmahini Farahani, M.**, Rezaei, K., Karamollahi, S., & Moghadam, F. J. (2024, January). Application of PCA algorithm in remote sensing using Python programming language (case study: Landsat 9 multispectral images). In *8th Symposium of Sedimentological Society of Iran*, Hormozgan, Iran
4. Rezaei, K., & **Farmahini Farahani, M.** (2023, September). The importance of using Python programming language in Earth science. In *26th Conference of Geological Society of Iran*, Urmia, Iran

Books

1. Rezaei, K., **Farmahini Farahani, M.**, Karimzadehasl, E. (Trans.). (2024). *Introduction to Python in Earth science data analysis: From descriptive statistics to machine learning*. **Tasir Publication**. (Original work published by Maurizio Petrelli)
2. Karimi Pashaki, A., **Farmahini Farahani, M.**, Soleimani, J., & Karimzadegan, Y. (2023). *Environmental risk management*. **Azargan Publication**

SKILLS & INTERESTS

Programming Language: Python, Julia, Shell scripting (Bash), Familiar with R

Markup Language: Markdown, L^AT_EX

Software: ENVI, Global Mapper, ArcGIS, QGIS, Canva, Agisoft Metashape, Blender, 3dsMax, Google Earth Pro, Datamine, SAS.Planet, Corel Draw, Groundwater Vistas

Fieldwork Skills: Drone Surveying, Geoelectrics (IP-RS)

Language: Farsi (Persian): *Native* , English: *Fluent (C1)*

Research Interests: Seismic Data Processing, Geophysics, Remote Sensing, Hydrogeophysics, Machine Learning, Image Processing, Open-Source