

Mohammad Reza Mohammadi



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MohammadReza



Iran, Kordestan Prov, Qorveh City

Environmental Data Scientist

EDUCATION

University of Tarbiat Modares (October 2019 - March 2021)

MSc in Environmental Science, GPA: 3.70/4.00 (17.13 / 20)

Thesis: Assessing of changes in spatial density and emissions of aircraft pollutants during the corona virus (2019-2020)

University of Shiraz (October 2014 - October 2018)

Bachelor of Science in Environmental Science

RESEARCH INTERESTS

Remote Sensing in Environment, Machine Learning, Deep Learning, Impacts of Climate Change, Natural Disasters, Risk Assessment in Environment

KEY SKILLS

- **Programming Languages:** Python, Google Earth Engine, R, SQL, Parallel Computing
- **Libraries & Frameworks:** Pandas, NumPy, SciPy, Xarray, Dask, GeoPandas, Scikit-Learn, Keras, TensorFlow, Matplotlib, Seaborn, and more.
- **Software & Tools:** ArcGIS, TerrSet, ENVI, QGIS, Photoshop, Microsoft Office Suite (Word, Excel, PowerPoint).

WORK EXPERIENCE

The Faculty of Natural Resources of Tarbiat Modares University, Mazandaran, Noor,
Python Programming Instructor, April 2020

Delivered a comprehensive and structured Python programming course designed to equip students with fundamental and advanced skills through a progressive, four-part curriculum:

- **Foundational Concepts:** Introduced the Python programming language, emphasizing its versatility, simplicity, and broad applications across various fields.

- **Data Mastery:** Provided in-depth instruction on Data Types and Data Structures, demonstrating practical techniques for creating, manipulating, and optimizing data-driven solutions.
- **Logical Flow:** Explained the application of loops and conditions to build efficient, adaptable, and streamlined algorithms.
- **Functional Programming:** Guided students through the creation and utilization of functions, employing real-world examples to illustrate key principles and enhance learning.

Data Processing Management Center, Faculty of Natural Resources, Tarbiat Modares University - Mazandaran, Noor,

IT Technician & Scientific Programmer / Research Programmer, October 2019 – July 2021

Contributed technical expertise and innovative programming solutions to enhance academic research and operational efficiency:

- **Analytical Programming:** Developed and optimized algorithms to support research projects, leveraging scientific programming techniques to address complex environmental challenges.
- **Cross-Disciplinary Collaboration:** Provided expert programming and IT support to students and faculty members across various departments, fostering an environment of collaborative research and knowledge sharing.
- **System Administration & Maintenance:** Installed, configured, and maintained critical software and systems for students, ensuring seamless functionality and resolving technical issues

Faculty of Natural Resources, Tarbiat Modares University - Mazandaran, Noor,

Teaching Assistant, June 2020 – July 2020

Provided dedicated instructional support to enhance students' learning experience in specialized environmental courses:

- **TerrSet Software Instruction:** Assisted in teaching TerrSet software, guiding students through its functionalities for geospatial analysis and environmental modeling.
- **Climate Change Course Guidance:** Offered personalized mentorship and academic support to students, facilitating their understanding of complex climate change concepts and methodologies.

Faculty of Natural Resources, Tarbiat Modares University - Mazandaran, Noor,

Scientific Association Member, October 2019 – July 2021

Actively contributed to academic and promotional activities aimed at enhancing scientific engagement and collaboration:

- **Visual Communication & Design:** Designed high-quality posters and visual materials to promote events, research findings, and academic initiatives effectively.
- **Team Collaboration:** Collaborated with multidisciplinary teams to plan, organize, and execute scientific events and projects, fostering a collaborative research environment.

PROJECTS

Persepolis Pars Petrochemical Company, Asaluyeh,
Lead Data Engineer & Analyst, September 2020 (Team of 2)

Responsibilities:

- **Data Engineering:** Designed and implemented data pipelines using Python and Google Earth Engine for acquiring, processing, and visualizing satellite-based environmental data.
- **Trend Analysis:** Conducted comprehensive analysis to identify patterns and trends in air pollutant concentrations over time.
- **Collaboration:** Coordinated efforts within a two-person team to ensure accurate data interpretation and validation.
- **Reporting:** Authored a detailed report summarizing findings, methodologies, and actionable recommendations for improved environmental management.
- **Outcome:** Successfully delivered a high-quality report that contributed to strategic decision-making processes for pollution control within the Pars Special Economic Energy Zone.

PUBLICATIONS

Mohammad Reza Mohammadi, "Factors Affecting Carbon Flux by Ensemble Models in Europe." Springer (In Progress).

HOBBIES & INTERESTS

Academic Achievement: Ranked **24th** nationwide in the Iranian Universities Entrance Exam for MSc admission.

Competition Excellence: Secured **2nd** place in the National Air Pollution Competition.

Certifications:

- **Python Workshop Certification** – PacktPub
- **Python Programming Language Teaching Certification**
- **Population and Environment Course** – Organized by UNFPA
- **Biotechnology & Genetic Engineering in Knowledge-Based Production**
- **Application of GIS in Natural Resources and Environment**

LANGUAGE SKILLS

Persian: Native

Kurdish: Native

English: IELTS 7 (will be taken soon)