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).

HONORS

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)