MOHAMMAD HOSSEIN AMINIAN

Data Scientist | AI Modeler | Analyst

mohammadhossein.aminian@gmail.com | Isfahan, Iran
mh-aminian.github.io | github.com/mh-aminian | linkedin.com/in/mh-aminian

SUMMARY

A highly motivated and technically proficient researcher with hands-on experience in Artificial Intelligence, Machine Learning, and Data Science, particularly in interdisciplinary applications such as material machining and cybersecurity. I specialize in developing and optimizing predictive models using artificial neural networks, feature selection techniques, and metaheuristic algorithms under limited-data conditions. With a strong foundation in statistical analysis, algorithm implementation, and sensitivity modeling, I am passionate about bridging domain knowledge with advanced AI methodologies. I actively contribute to ongoing research and continue refining models and workflows to achieve interpretable, high-performance results across scientific and real-world datasets.

EXPERIENCE

Research Assistant – Dr. Arash Khosravi

Mahallat Institute of Higher Education – Mahallat, Iran ***Sep 2024 – present***

- Assisting with interdisciplinary research on machine learning, neural networks, and optimization methods for engineering applications.
- Contributing to scientific writing, code development, and experimental design for joint publications.

Teaching Assistant, Principles of Computational Intelligence

Mahallat Institute of Higher Education – Mahallat, Iran ***Mar 2024 - Jun 2024***

- Supported undergraduate students with course material, coding exercises, and project development.
- Provided assistance during lectures, graded assignments, and conducted review sessions.

Organizer and trainer of Python programming workshop

Mahallat Institute of Higher Education – Mahallat, Iran ***Dec 2022***

- Designed and delivered an introductory workshop on Python programming fundamentals.
- Created practical coding exercises and guided participants through hands-on applications

EDUCATION

B.Sc. Computer Engineering

Mahallat Institute of Higher Education – Mahallat, Iran ***Sep 2019 – Sep 2024***
GPA: 16.76/20 | 3.5/4.0 | 8.4/10

Data Science Training

Tose'e Higher Education Studies – Tehran, Iran ***Jan 2022 - Mar 2023***
Lecturer: Dr. Farzad Minooei (LinkedIn)

Publications

Metaheuristic-Trained Neural Networks for Predictive Modeling of EDM on Inconel 718: A Small-Data Approach Using GA and GWO

Aminian, M.H., Khosravi, A.

International Journal for Simulation and Multidisciplinary Design Optimization (IJSMDO), Under Review

Overcoming Data Limitations Using ANN with GA and GWO: A Study on EDM of Inconel 718

Aminian, M.H., Khosravi, A.

15th International Conference on Computer and Knowledge Engineering (ICCKE 2025), Under Review

Projects

Material Hardness Prediction & Sensitivity Analysis ***2024 – present***

- Developed a two-stage modeling pipeline using feature selection and regression to predict material hardness.
- Conducted sensitivity analysis to interpret model behavior.

Feature Optimization for Intrusion Detection Systems ***SEP 2024 – present***

- Designed a class-specific feature selection framework using multi-objective optimization.
- Built a modular and interpretable intrusion detection system.

Skills

Programming:	Python, R, Java
Artificial Intelligence:	Scikit-learn, TensorFlow, Keras, Model Selection & Evaluation, Hyperparameter Tuning, Pipeline Integration, Deep Learning, NLP, Generative AI (LLMs)
Data Engineering:	Data Preprocessing, Feature Engineering, Data Manipulation & Transformation, Time Series Processing
Data Visualization:	Matplotlib, Seaborn, Statistical & Categorical Plotting, Dashboard Design
Data Analytics & BI:	SQL (SQL Server, MySQL), Power BI, Tableau, Excel (VLOOKUP, Pivot Tables, Conditional Formatting)
Web Development:	Django, Django REST Framework (DRF), HTML, CSS, Bootstrap 5, Git & GitHub
Soft Skills:	Teamwork, Problem Solving, Time Management, Adaptability, Teaching

Languages

Persian: Native **English:** B2 (IELTS Overall 6.5)

Interests

Large Language Models (LLMs) | Generative AI | FAIR Data Management and Big Data

Natural Language Processing (NLP) | Deep Generative Learning | Reinforcement Learning