Iman Farhadian Dehkordi

Interdisciplinary Researcher
Artificial Intelligence, IoT & Intelligent Infrastructure
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RESEARCH PROFILE

Interdisciplinary researcher with academic training in Civil Engineering and Information Technology Engineering, supported by extensive practical experience in IT infrastructure. Research interests span machine learning, optimization, IoT and networked systems, with an emphasis on anomaly detection, reliable monitoring, interpretable modelling, and data-driven decision support for intelligent infrastructure and cyber-physical systems.

RESEARCH INTERESTS

- Machine learning and optimization for intelligent infrastructure
- IoT sensing, security, and anomaly/intrusion detection
- Time-series, sensor-data, and multi-source data analytics
- Reliable, explainable, and responsible artificial intelligence
- Network and infrastructure monitoring and reliability
- Smart infrastructure and data-driven decision support for cyber-physical systems

EDUCATION

- Islamic Azad University — September 2021
  M.Sc. in Information Technology Engineering
  Thesis: Machine-learning-based intrusion detection in IoT networks using the Grey Wolf Optimizer algorithm
- Islamic Azad University — September 2011
  B.Sc. in Civil Engineering
  Technical Project: Computational implementation of Hansen's method for estimating foundation bearing capacity using PHP

SELECTED PUBLICATIONS

- **Farhadian Dehkordi, I.**, & Manochehri, K. (2026). Enhancing intrusion detection using MAG: A shallow multilayer perceptron tuned with Adam and grey wolf optimization. Cluster Computing, 29, Article 576. https://doi.org/10.1007/s10586-026-06323-2
- **Farhadian Dehkordi, I.**, Manochehri, K., & Aghazarian, V. (2023). Internet of Things (IoT) Intrusion Detection by Machine Learning (ML): A Review. Asia-Pacific Journal of Information Technology and Multimedia, 12(1). https://doi.org/10.17576/apjitm-2023-1201-02

SELECTED RESEARCH PROJECTS

- Enhancing Intrusion Detection Using MAG — 2024–2026
  Developed a shallow multilayer perceptron tuned with Adam and Grey Wolf Optimization for high-performance IoT intrusion detection; the resulting peer-reviewed article was published in Cluster Computing, 29, Article 576. DOI: https://doi.org/10.1007/s10586-026-06323-2
- Explainable Intrusion Detection for IoT Systems — 2025
  Investigated model-interpretability and explanation methods for optimized machine-learning models used in IoT security analytics.
- Federated and Optimized Intrusion Detection for Distributed IoT Networks — 2025
  Explored federated and optimization-based learning approaches for intrusion detection across connected and distributed IoT environments.
- Wireless Sensor Network Reliability Assessment — 2024
  Applied AADL-based modelling to wireless sensor network reliability assessment, with emphasis on dependable sensing, monitoring, and connected-system operation.
- M.Sc. Thesis: Machine-Learning-Based Anomaly and Intrusion Detection in IoT Networks — 2021
  Designed and evaluated an optimization-assisted machine-learning workflow for IoT intrusion detection, including data preprocessing, feature selection, classification, and performance analysis.

TECHNICAL SKILLS

- Programming & data analysis:
  Python, MATLAB, SQL, Weka and PHP; data preprocessing, feature engineering, model evaluation, time-series analysis, and applied statistical analysis.
- Machine learning:
  Classification, shallow neural networks, anomaly and intrusion detection, feature selection, performance evaluation, and interpretable prediction.
- Optimization & modelling:
  Grey Wolf Optimizer, optimization-assisted learning, reliability-oriented modelling, and comparative evaluation of predictive models.
- IoT, monitoring & networks:
  IoT and sensor-rich systems; Wireshark, PRTG, Splunk, Zabbix, SolarWinds and The Dude.
- Systems & infrastructure:
  Linux, Windows Server, VMware, HPE servers, Raspberry Pi, RouterOS, Kerio Control, and OpenWrt/DD-WRT.
- Web & database systems:
  MySQL, Microsoft SQL Server, database-backed web systems, HTML/CSS, jQuery, PHP, WordPress, Joomla and OJS

TEACHING EXPERIENCE

- Lecturer | Allameh Naeini Higher Education Institute — Sep 2021 – Jul 2024
  Taught Local Computer Networks, Network Workshops, Installation and Configuration of Networks, Expert Systems, Computer Architecture, and Technical Writing and Oral Presentation.
- Technical Instructor | Herfeh va Fan-e No Technical and Vocational Training Institute — Sep 2018 – Jul 2021
  Taught MikroTik RouterOS, Network Security Fundamentals, Front-End Web Development, WordPress Development, Windows Server Administration, and Linux System Administration.

PROFESSIONAL EXPERIENCE

IT & Infrastructure Specialist | Barfaraz Company — Full-time: 2013–2016 and 2021–present; Part-time: 2016–2021

Managed and supported servers, network systems, monitoring platforms, backup systems, and reliability-oriented infrastructure operations.

Performed network configuration, system administration, troubleshooting, operational monitoring, and support for connected IT environments.

- Web Programmer | The ExtremeWeb Group — Full-time 2011–2013; Part-time 2007–2011
  Developed and maintained database-backed web systems using PHP, CMS platforms, front-end technologies, and relational databases.
- Additional IT roles:
  IT Support Specialist, IT Audit Helper, Network Support Technician, and IT Systems Assistant.

ACADEMIC SERVICE

- Peer Reviewer — 2024–2025
  Asian Journal of Research in Computer Science, Journal of Engineering Research and Reports, and BP International book publications.

SELECTED CERTIFICATES

- Linux System Administration with IBM Power Systems — IBM / Coursera — 2023
- Python Data Structures — University of Michigan / Coursera — 2023
- Introduction to Artificial Intelligence (AI) — IBM / Coursera — 2022
- SQL for Data Science — University of California, Davis / Coursera — 2022
- Cloud Computing Concepts, Parts 1–2 — University of Illinois Urbana-Champaign / Coursera — 2021–2022
- Software Defined Networking — Georgia Institute of Technology / Coursera — 2021

AWARDS

- Full Tuition Waiver Scholarship for the M.Sc. — Issued by the Welfare Organization — 2015
- Full Tuition Waiver Scholarship for the B.Sc. — Issued by the Welfare Organization — 2005

LANGUAGE SKILLS

English (Professional) — Persian (Native)