Razieh Ghaedi

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Professional Summary

MSc Computer Scientist with distinction and experience in software development, machine learning, and research. Strong background in Python, PyTorch, and Java, with a proven publication record and industry experience.

EDUCATION

Master of Computer Science **Sep 2023 – Oct 2024**

Manchester Metropolitan University *Manchester, UK*

- **GPA:** Distinction (80/100)
- **Dissertation:** Deep Learning-Based Cross-Domain Facial Expression Recognition (Grade: 80/100)
- **Relevant Coursework:** Advanced Object-Oriented Programming, Algorithms and Data Structures, Cloud and Enterprise Development, Information Systems and Databases, Advanced Computer Networks, AI Ethics and Governance

BSc in Information Technology Engineering **Sep 2009 – Feb 2014**

- **Relevant Coursework:** Data Structures, Algorithms Design, Advanced Programming, Operating Systems, Database Design, Artificial Intelligence, Digital Electronics, Software Engineering

TECHNICAL SKILLS

Programming Languages: Python (Advanced), Java (Advanced), C# (Intermediate)
ML/DL Frameworks: PyTorch, TensorFlow, Scikit-learn
NLP & Text Mining: Topic modelling (LDA, BERTopic), sentiment/stance analysis, text classification
Databases: PostgreSQL, MySQL, Redis, MongoDB, DynamoDB
Cloud & Infrastructure : AWS (EC2, S3, Lambda, RDS)
Development Tools: Git/GitHub, LaTeX, Microsoft Office Suite
Web Technologies: REST APIs, JDBC, JSP, HTML/CSS, JSON/XML

PUBLICATIONS

- Zarina, O., Saleh Pour, M. J., **Ghaedi, R.**, Shafei Khah, M. (2023). *Markov-Based Reliability Assessment for Distribution Systems Considering Failure Rates.* IEEE Access, 11, 10018–10031. DOI: 10.1109/ACCESS.2023.10032136
- **Ghaedi, R.**, BabaAhmadi, A., Alam, N., Fan, X. (2025). *Graph-Attention Network with Adversarial Domain Alignment for Robust Cross-Domain Facial Expression Recognition.* Accepted to Asian Conference on Machine Learning (ACML).
- Shirdel, M., **Ghaedi, R.**, Fan, X. (2025). *SACA: Selective Attention-Based Clustering Algorithm.* Under review at the Journal of Complex & Intelligent Systems. arXiv:2508.17150
- Vafadarnikjoo, A., **Ghaedi, R.**, Imran, N. (2025). *A Text Mining and Topic Modelling Analysis of UK Modern Slavery Act Statements to Assess Effectiveness of Grievance Disclosures.* In preparation.

EXPERIENCE

Research Associate **2024 – Present**

University of Sheffield *Sheffield, UK*

- Applied text mining and topic modelling (LDA) to analyse UK Modern Slavery Act statements, identifying key themes and evaluating grievance disclosure effectiveness.
- Developed a Decision Support System using BWM and STE to improve decision-making efficiency for (specific application, e.g., supply chain optimization).

Teaching Assistant **2024 – Present**

rTriibe (Education Recruitment Agency) *Sheffield, UK*

- Assisted classroom teachers across primary and secondary schools with lesson delivery, classroom management, and one-to-one pupil support, fostering a safe and engaging learning environment.

Software Developer **2014 – 2021**

Asan Tech Mana Company *Shiraz, Iran*

- Developed and maintained Java-based enterprise applications with emphasis on backend logic and relational database integration
- Led the migration of legacy systems to modern frameworks, improving system maintainability and user experience
- Collaborated with cross-functional teams to troubleshoot, deploy, and document software modules

PROJECTS

Graph-Attention Network with Domain Alignment for Robust Cross-Domain FER | *Python, PyTorch* **2024**

- Developed a deep learning model integrating ResNet-50 and Graph Attention Networks with domain adaptation techniques (MMD, CORAL, GRL), improving accuracy by mean 74% across 6 diverse datasets.

MPDD: Multimodal Personalized Depression Detection | *Python, PyTorch, Transformers* **2024**

- Developed multimodal deep learning system for depression detection using audio, visual, and text features with transformer-based fusion architecture
- Implemented attention mechanisms and multi-task learning, supporting multiple feature types and classification tasks with robust error handling

Reducing Forced Labor Recruited through Deceptive Job ads (ReForLeAD) | *Python, Topic Modeling* **2024**

- Cleaned and pre-processed the dataset collated from Employment Scam Aegean Dataset (EMSCAD) and charities involved in the data collection for the aim of data analysis of deceptive job ads from social media to tackle forced labour and modern slavery.
- Applied topic modeling techniques including Latent Dirichlet Allocation (LDA) and emoji analysis to identify indicators so as to distinguish deceptive jobs leading to forced labor from scam and clean job adverts.

Cloud-Based Film Management System | *Java, JDBC, REST API, JSP, AWS Elastic Beanstalk* **2023**

- Built a scalable MVC web app with Java Servlets, JDBC, and Bootstrap, deployed on AWS Elastic Beanstalk, using DAO and Singleton patterns for modularity.
- Created RESTful APIs with JSON/XML responses via JAXB/GSON, securing data with Prepared Statements and enhancing UI with AJAX and jQuery.
- Refactored servlet code into modular layers, improving scalability and maintainability, and integrated AWS RDS and Azure MySQL for efficient database management.

ACHIEVEMENTS & CERTIFICATIONS

GRE Test **July 2022**
Score: 328 (Verbal: 158, Quantitative: 170, Analytical Writing: 4.0) *ETS*

IEEE Computer Society Membership **2024 – Present**
Member No. 100476059 *Professional Development*

REFERENCES

Dr. Nashid Alam
MSc Supervisor, Lecturer, Manchester Metropolitan University *n.alam@mmu.ac.uk*

Dr. Rahim Taheri
BSc Supervisor, Senior Lecturer, University of Portsmouth *rahim.taheri@port.ac.uk*

Dr. Amin Vafadarnikjoo
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