Ali (Seyedali) Mohammadi

Contact Information

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Education

Ph.D • Computer Science   USA • University of Maryland, Baltimore County (UMBC) (2021 Aug – Present, GPA:3.81)
Expected Graduation: Summer/Fall 2026.
Advisors: Prof. Manas Gaur and Prof. Frank Ferraro.
Thesis: Explainable Language Models.

MSc. • Artificial Intelligence   Iran • Islamic Azad University (GPA: 3.63)
Project: Facial Expression Recognition Based on Adaptive Neuro-Fuzzy Inference System.

BSc. • Software Engineering   Iran • Islamic Azad University (GPA: 3.40)

Research Interest

Natural Language Processing • Machine Learning • Explainability • Robustness • AI for Health & Wellness

Experiences

Internship, Infinitus Systems, Inc. • San Francisco, CA (Summer 2025)
– Designed LingVarBench (12 weeks): a controllable synthetic data/benchmark for noisy phone calls with variation tags (e.g. pauses, noise, hesitations, self-corrections) across general (ZIP, name, DOB) and specific (vision issue, respiratory issue, pain rating) entities.

– Scaled generation & validation: produced 10k+ HIPAA-compliant transcripts leveraging GPT-4, Gemini 2.5 Pro, and DSPy SIMBA to stress-test and refine extraction prompts.

– Operationalized improvements: partnered with cross-functional teams to deploy optimized prompts, raising NER accuracy up to 12% and improving reliability in production systems.

Research Assistant, UMBC • (2023 May – Present)
– Lead author of a study on LLM receptivity to external label definitions, introducing definition-permutation tests and "knowledge conflict" analysis, Published at EMNLP 2025 (Main Conference).

– Lead author of WellDunn, a benchmark and analysis framework on the robustness and explainability of Large Language Models in identifying wellness dimensions, Published at EMNLP BlackboxNLP 2024.

– Lead author (equal-contribution first author) of "Can LLMs Obfuscate Code?", a systematic study of LLM-generated assembly-code obfuscation, Published at AAAI 2025.

– Conduct research on enhancing the reliability, interpretability, and safety of LLMs through NeuroSymbolic reasoning, retrieval-augmented generation, and knowledge graph integration.

– Co-authored REASONS, a benchmark for retrieval and automated citation of scientific sentences (Arxiv 2025).

– Book chapter (Chapter 8, co-author): IoT-Based Preventive Mental Health Using Knowledge Graphs and Standards for Better Well-Being, in the edited book Smart Technologies for Sustainable Development Goals: Good Health & Well-Being (eds. A. Jose Anand, S. Krishnan). Routledge/Taylor & Francis, London, 2026.

University of Maryland, Baltimore County • Graduate Teaching Assistant (2021 Aug – 2023 May)
– Machine Learning, Data Structure

Publications

Do LLMs Adhere to Label Definitions? Examining Their Receptivity to External Label Definitions
Seyedali Mohammadi, Bhaskara Hanuma Vedula, Hemank Lamba, Edward Raff,
Ponnurangam Kumaraguru, Francis Ferraro, and Manas Gaur.
ACL (EMNLP 2025, Main Conference)

Can LLMs obfuscate code? A systematic analysis of large language models into assembly code obfuscation
Seyedreza Mohseni*, Seyedali Mohammadi*, Deepa Tilwani, Yash Saxena, Gerald Ketu Ndawula,
Sriram Vema, Edward Raff, Manas Gaur (*equal contribution) **AAAI 2025**

WellDunn: On the Robustness and Explainability of Language Models and Large Language Models in Identifying Wellness Dimensions
Seyedali Mohammadi, Edward Raff, Jinendra Malekar,
Vedant Palit, Francis Ferraro, Manas Gaur **EMNLP 2024 (BlackboxNLP)**

LingVarBench: Benchmarking LLM for Automated Named Entity Recognition in Structured Synthetic Spoken Transcriptions
Seyedali Mohammadi, Manas Paldhe, and Amit Chhabra **arXiv 2025, In progress**
Work conducted during internship at Infinitus Systems, Inc.

Attribution in Scientific Literature: New Benchmark and Methods
Deepa Tilwani, Yash Saxena, Seyedali Mohammadi, Edward Raff, Amit Sheth,
Srinivasan Parthasarathy, Manas Gaur **arXiv 2024**

Book Chapter

IoT-Based Preventive Mental Health Using Knowledge Graphs and Standards for Better Well-Being *(Book chapter, Ch. 8)*. Amelie Gyrard, **Seyedali Mohammadi**, Manas Gaur, Antonio Kung. *Smart Technologies for SDGs: Good Health & Well-Being* (eds. A. Jose Anand, S. Krishnan), Routledge/T&F, 2026. **[Link]**

Certification

• **Python for Everybody**, University of Michigan (*Coursera*)
Getting Started with Python (100%), Python Data Structures (98.4%), Using Python to Access Web Data (97.4%), Using Databases with Python (98.1%), Capstone: Retrieving, Processing, and Visualizing Data with Python (96.2%)

• *Deep Learning Specialization*, *DeepLearning.AI (Coursera)*
Neural Networks and Deep Learning (100%), Improving Deep Neural Networks (100%), Convolutional Neural Networks (99.5%), Sequence Models (99%), Structuring Machine Learning Projects (96.7%)

Services

Reviewer: Computer Applications in Engineering Education (Wiley, 2020); ACM Transactions on Computing for Healthcare; IEEE Intelligent Systems (2024); AAAI '23, '24, '26; EMNLP '24.

Program Committee Member: AAAI 2026 (incl. AI Alignment Track); CySoc @ The Web Conf 2023; KIL @ SIGKDD 2023–2024; KG-STAR @ CIKM 2024.