# Ali (Seyedali) Mohammadi

## Contact Information

m294@umbc.edu Personal Page Google Scholar Linkedin

## 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)
Advisor: Dr. Mahdi Yaghoobi.
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—accepted to 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, to appear]**
*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.