

Kianoosh Vadaei

📍 Isfahan, Iran

✉️ kia.vadaei@gmail.com

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Education

BE	University of Isfahan, Computer Engineering	Sept 2021 – Present
•	GPA: 3.59/4.0 (17.22/20.0)	
•	Bachelor's Research Project: Exploring Self-Supervised Learning in Natural Language Processing (Ongoing)	

Research Interests

Natural Language Processing (NLP), Computer Vision, AI Explainability and Interpretability

Publications

Adaptive Chunking for VideoRAG Pipelines with a Newly Gathered Bilingual Educational Dataset,
Arshia Hemmat, **Kianoosh Vadaei**, Melika Shirian, Mohammad Hassan Heydari; Afsaneh Fatemi
2025 29th International Computer Conference, Computer Society of Iran (CSICC), Tehran, Iran

Leveraging Retrieval-Augmented Generation for Persian University Knowledge Retrieval
Knowledge Retrieval,
Arshia Hemmat, **Kianoosh Vadaei**, Mohammad Hassan Heydari, Afsaneh Fatemi
2024 15th International Conference on Information and Knowledge Technology (IKT), Isfahan, Iran
[Link ↗](#)

Research Experience

Adaptive Chunking for VideoRAG	2025
• Developed an adaptive chunking method to improve VideoRAG for bilingual educational content.	
• Developed a bilingual dataset, improving retrieval accuracy and efficiency.	
<i>Accepted and Published at CSICC</i>	
Retrieval-Augmented Generation on Persian question-answering Dataset	2024
• Built a vector database from the university website for document retrieval	
• Evaluated RAGAS metrics on the RAG system using different LLMs	
<i>Accepted and Published at IKT</i>	
Multilingual 3D Shape Understanding in Vision-Language Models	2025
• Translated CLEVR and SuperCLEVR datasets and created questions for CLEVR-Tex.	
• Assessed VLMs and LLMs for multilingual question-answering with images.	
<i>Planned submission to COLM 2025</i>	
AI Research & Development Intern , Hoopad Company	June 2024 – Aug 2024
• Led AI research on Siamese networks for enhanced face recognition.	
• Integrated STT, TTS, and LLM function calling for optimized assistant performance.	

Teaching Experience

Teaching Assistant

- **Fundamentals of Computer Programming** (4 times)
Fall 2022 (Prof. Mojtaba Mahdavi, Prof. Reza Ramezani), Fall 2023 (Prof. Mojtaba Mahdavi, Prof. Hossein Mahvash), University of Isfahan

- **Advanced Programming (C# and C++)** (4 times)
Spring 2023 (Prof. Mahdi Kiani, Prof. Mojtaba Mahdavi), Spring 2024 (Prof. Ehsan Mahdavi, Prof. Mojtaba Mahdavi), University of Isfahan
- **Algorithms Analysis and Design**
Fall 2023 (Prof. Arash Shafiei), University of Isfahan
- **Computer Architecture**
Spring 2023 (Prof. Mehran Rezaei, Prof. Mahdi Kalbassi), University of Isfahan
- **Fundamentals of IoT**
Fall 2024 (Prof. Ali Bohlooli), University of Isfahan
- **Microprocessors and Assembly Language**
Fall 2024 (Prof. Mahdi Kalbassi), University of Isfahan
- **Applications of Artificial Intelligence in Cybersecurity**
Spring 2025 (Prof. Ehsan Mahdavi), University of Isfahan

Course Instruction

- **Fundamentals of Python Programming Course Instructor**
University of Isfahan, Cultural and Educational Affairs Office
- **Retrieval-Augmented Generation (RAG) Fundamentals Course Instructor**
Faradars

Selected Courses

Fundamentals of Artificial Intelligence (17.75/20), **Fundamentals of Computational Intelligence** (19/20), **Fundamentals of Machine Learning** (20/20), **Applications of Artificial Intelligence in Cybersecurity** (20/20), **Special Topics - Deep Learning** (19.8/20), **Fundamentals of IoT** (20/20).

Work Experience

University of Isfahan Artificial Intelligence Community (UIAI)

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|---|---------------------|
| Chairman | Mar 2023 – May 2025 |
| • Led the UIAI community for two terms, organizing events and AI competitions. | |
| Chief Secretary | |
| • Directed Gradient, UIAI's official magazine, overseeing content and publications. | |

TEDx University of Isfahan

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| Organizer | Aug 2023 – Feb 2024 |
| • Organized and executed the 4th TEDx University of Isfahan event, overseeing multiple teams and ensuring compliance, with 100+ participants. | |
| Event Page Link | |
| Co-Organizer | Jan 2024 – Present |
| • Co-Organizing the 5th TEDx University of Isfahan event. | |
| Event Page Link | |

7th International Conference on Internet of Things and Its Application

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|---|------|
| Executive Committee Member | 2023 |
| • Executive Committee Member for the 7th IoT Conference, handling communication, coordination, and logistics. | |

Skills

Hard Skills

- **Advanced:** Python, C++, Pytorch
- **Intermediate:** Keras, C#

Language

- **English:** IELTS 7.5 (Listening: 8.0, Reading: 7.5, Writing: 7.0, Speaking: 7.0), C1
- **Persian:** Mother Tongue