EBRAHIM MOUSAVI

Generative AI Researcher and Engineer



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Google Scholar



WORK EXPERIENCE

Al Team Lead - LLMs & Agents Makan System / Research Collaborations

Aug 2024 - Now

- · Led the design, fine-tuning, and deployment of custom LLMs for code generation and protein sequence analysis, specializing in multi-GPU training, LoRA, tokenizer design.
- Built Retrieval-Augmented Generation (RAG) pipelines and developed task-oriented and open-domain chatbots using LLMs.

Al Instructor

Freelancer / Contract Roles

☐ July 2023 - Now

- Published 100+ advanced tutorials on ML, NLP, and LLMs at
- Developed curriculum and tutorials for real-world AI workflows using Python and PyTorch.

Al Team Lead

Resana (in partnership with Rutelia Company, Japan)

Feb 2024 - Aug 2024

Tehran

• I developed and led the implementation of Image Generative AI and worked on LLM-based AI agents for intelligent document processing.

Senior Computer Vision Developer

AlHomeDesign in Vancouver, Canada

Sep 2023 - Feb 2024

Canada. Tehran's office

 Developed and deployed diffusion and vision-language models for real estate, including item removal, virtual staging, and dayto-dusk changes. Improved image synthesis by integrating advanced diffusion models and collaborated with teams to scale Al tools for interior design.

Deep Learning Researcher and Developer

Baharan Company & Freelance

🗖 Jan 2021 - Aug 2023

Tehran, Iran / Remote

- Deep Learning Developer, focusing on computer vision and NLP (Jan 2021 - Mar 2022).
- Continued independently as a Deep Learning Freelancer, delivering AI solutions for various clients (Apr 2022 - Aug. 2023).

SUMMARY

Al developer with experience in deep learning, computer vision, and NLP, experienced in publishing peer-reviewed research and mentoring others. Interested in leading innovative projects in LLM research and development.

EDUCATION

Master of science in IT Tarbiat Modares University, Tehran, Iran

Sept 2018 - Sep 2021

Thesis title: Designing a fashion recommendation system

B.Sc. in Software Engineering Islamic Azad University, Isfahan, Iran

Feb 2009 - Feb 2015

Thesis title: Implementation of a pyramid security system with firewall for computer networks

PUBLICATIONS

Q1 Journal Articles

- ATTENDEE: an AffecTive Tutoring system based on facial EmotioN recognition and heaD posE Estimation to personalize e-learning environment Journal: Education and Information Technologies (Springer),
- FELA-DNN framework Journal: Soil Dynamics and Earthquake Engineering (Elsevier), 2023

arXiv Preprint

• How Self-Supervised Learning Can be Used for Fine-Grained Head Pose Estimation? arXiv Preprint, 2021

LANGUAGES

Persian



English

(IELTS 6.0 - Duolingo 110)



Turkish



Network & Systems Engineer | Linux Expert

Freelance / Contract Roles

- Feb 2017 Mar 2020
- Iran
- Designed, configured, and maintained secure network infrastructures using Cisco (CCNA-level) and Microsoft systems (Active Directory, DNS, DHCP, Group Policy).

TEACHING & MENTORING

Tarbiat Modares University

- Mar 2020 Jul 2024
- Tehran, Iran
- Taught and assisted in Machine Learning and Neural Networks courses for five semesters, demonstrating strong communication and pedagogical skills.
- Designed and teach a comprehensive Machine Learning course using Python, scikit-learn, and PyTorch.
- Created and maintained an open-source GitHub repository with lectures, code notebooks, and assignments.

Research Assistant

LBB Laboratory, University of Tehran

- May 2024 Jan 2025
- Tehran, Iran
- Supervised by Prof. Ali Masoudi-Nejad.
- Conducting research on systems biology and bioinformatics, including data analysis and model development.

AI & Machine Learning Writer M

- Authored a series of tutorials on machine learning, deep learning, and Python programming aimed at simplifying complex concepts for a broad audience.
- Covered practical topics such as model training, evaluation, and neural network design, with hands-on code examples.

SELECTED RESEARCH PROJECTS

LLMs and Al Agents Course 🕠

 A comprehensive tutorial series for developers interested in GenAl, LLMs, and deploying Al agents in real-world scenarios.

Large Language Model with PyTorch 🦪

• Implemented a custom LLM from scratch using PyTorch, focusing on training efficiency and text generation, showcasing a strong foundational understanding of LLM architectures.

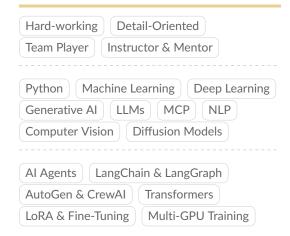
Protein Language Model 🦃

 Developed a GPT-based model to learn embeddings from protein sequences, inspired by LLM techniques, demonstrating interdisciplinary research capabilities.

Facial Age Estimation (7)

Prediction of human age from facial images with Transformers.

STRENGTHS



REFEREES

Prof. of IT Gholam Ali Montazer

- Tarbiat Modares University, Tehran, Iran
- Montazer@modares.ac.ir
- Google Scholar