

Amir Mohammad Fakhimi

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Education

- [Sharif University of Technology](#) Tehran, Iran
B.Sc. in Computer Engineering – GPA: 18.72/20 Sep 2020 – Sep 2025
 - **Selected coursework (grade /20):** Natural Language Processing (Grad, 19.8), Advanced Information Retrieval (20), Machine Learning (19.6), Artificial Intelligence (19.6), Fundamentals of 3D Computer Vision (18.7), Linear Algebra (20), Probability & Statistics (20)

Research Interests

- LLM/VLM Reasoning
- Multimodal Learning
- Multilingual Robustness
- Grounding & Evaluation

Research Experience

- **Number Understanding in LLMs** [Qatar Computing Research Institute](#)
Supervisor: [Dr. Ehsaneddin Asgari](#) (QCRI) Apr 2025 – Present
 - Built a multilingual benchmark for numeric reasoning across **4 domains** (Basic, Numeric, Temporal, Monetary) and **4 languages** (English, Persian, Arabic, Turkish).
 - Generated almost **1.2M multiple-choice prompts per language** via a template-driven pipeline with dynamic answers/distractors and controlled locale-specific formatting.
 - Ran an evaluation harness on open-source LLMs (e.g., Gemma, Llama, Qwen) and analyzed cross-lingual failure patterns.
- **Abductive Reasoning in LLMs** [Sharif University of Technology](#)
Supervisors: [Dr. Mohammad Hossein Rohban](#) (RIML Lab) and [Dr. Mahdi Jafari Siavoshani](#) (INL Lab) May 2025 – Aug 2025
 - Reviewed **50** papers, cataloged **30** abductive-reasoning datasets (commonsense/medical/investigative), and documented evaluation gaps.
 - Ran **70** model–dataset evaluations (e.g., Llama, GPT) and summarized recurring failure modes to guide method development.
- **AI-Driven Referee Recommendation for [Scientia Iranica Journal](#)** [Sharif University of Technology](#)
Supervisor: [Dr. Shohreh Kasaei](#) (IP Lab) Feb 2024 – Present
 - Developed LLM-based components for reviewer recommendation and automated expertise profiling from publication records to support editorial workflows.
- **Survey: Compositional Problems in Stable Diffusion Models** [Sharif University of Technology](#)
Supervisors: [Dr. Mahdieh Soleymani Baghshah](#) (ML Lab) and [Dr. Mohammad Hossein Rohban](#) (RIML Lab) Oct 2023 – Apr 2024
 - Surveyed methods addressing compositional failures (object relations, spatial consistency, scale) in diffusion-based generation and produced a taxonomy and visual summaries.

Industry Experience

- **Artificial Intelligence Intern** [Sokhan AI](#)
Persian ASR (Whisper) fine-tuning and evaluation Jun 2024 – Sep 2024
 - Built an end-to-end fine-tuning + evaluation pipeline for [Whisper](#) on public and proprietary Persian datasets.
 - Achieved an approximately **10% WER reduction** vs. prior baselines with automated metric tracking and benchmark reporting.
 - Contributed a merged [Hugging Face Transformers PR](#) (with tests) adding Whisper label-length validation to prevent silent training failures.

- **Software Development Intern**

[Rahnema College](#)

Aug 2022 – Nov 2022

[Tapsi](#)-sponsored software engineering bootcamp

- Selected from almost **900 participants** and trained across front-end (TypeScript, React.js), back-end (Node.js), mobile (Kotlin), and DevOps (Docker/Kubernetes).
- Built the front-end for a fantasy football product ([FPL project](#)) in a team of six.

Honors and Awards

- **Direct Master's Program Candidate (AI)**, Sharif University of Technology – Selected among 18 finalists (2023)
- **Selected Athlete**, Sharif University of Technology Table Tennis Team – Represented Sharif University of Technology at the 16th National Students' Sports Olympiad (2024)
- **2nd Place** and **3rd Place**, Sharif University of Technology Table Tennis Championships (2025)

Selected Projects

- [LLMs' Citation Benchmark](#) [Sharif University of Technology](#)
Evaluation pipeline for citation-grounded generation *Jul 2024 – Aug 2024*
 - Built an end-to-end evaluation pipeline (generation → evidence → scoring) for citation faithfulness.
 - Proposed a metric based on atomic-fact decomposition and evidence support checking and ran experiments across prompt and retrieval variants.
- [Llama 3 LoRA Fine-Tuning](#) [Sharif University of Technology](#)
LoRA fine-tuning on a gender-neutralization dataset *Jul 2024 – Aug 2024*
 - Created a [gender-neutralization dataset](#) and performed LoRA fine-tuning on Llama 3.
- [Amoogle: Advanced Information Retrieval Pipeline](#) [Sharif University of Technology](#)
Course project of Advanced Information Retrieval course *Feb 2022 – Aug 2023*
 - Implemented and evaluated BM25/vector-space retrieval and added learning-based components then built a crawler for [Semantic Scholar](#) and a personalized PageRank + recommender pipeline with a UI.

Teaching & Service

- **Teaching Assistant, [Sharif University of Technology](#):**
 - **Head TA / lead roles:** Database Design (5 semesters; 3 as Head TA), Mobile Programming (Head of iOS homework), Advanced Programming (3 semesters, 2 as Head of a Homework), Fundamentals of Programming (3 semesters, 1 as Head of a Homework).
 - **Selected TA roles:** NLP (Grad), Generative Models (Grad), Machine Learning (4), Advanced Information Retrieval (3), Artificial Intelligence (3), Linear Algebra, Probability & Statistics, and 7 others.
- **Instructor (NLP Team), [IOAI](#) Preparation Program:** Delivered **5 NLP sessions** (almost **70 students/session**) and created theory notes and hands-on notebooks on short notice.
- **[Sharif University of Technology](#) & [Quera](#) outreach: [Introduction to Programming and Algorithms](#):** Supported around **2000** students with almost **100** staff; wrote textbooks, designed exercises, mentored a group; recognized as a **top mentor**.
- **Selected Service:** Scientific Staff, [Rayan AI Global Contest](#) (Anomaly Detection track, 2024); Front-end Developer, [Gamein](#) (2024); Technical Staff, [ICPC](#) Asia Regional, Tehran Site (2022–2024); Front-end Developer, [Winter Seminar Series \(WSS\)](#) (2023); and 8 others.

Technical Skills

- **Programming Languages:** Python, TypeScript/JavaScript, Java, Swift, C, SQL
- **ML/AI:** PyTorch, TensorFlow, Hugging Face (Transformers/Datasets/PEFT/Evaluate), scikit-learn, OpenCV, NLTK
- **Data/Visualization:** NumPy, Pandas, Matplotlib, Plotly
- **Web:** FastAPI, Node.js, PostgreSQL, Redis, React.js, Next.js
- **Tools:** Linux, Git, Docker