





# Amir Mohammad Fakhimi

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 [AmirMohammadFakhimi](https://github.com/AmirMohammadFakhimi)  [amirmohammadfakhimi](https://medium.com/@amirmohammadfakhimi)  [www.amfakhimi.com](https://www.amfakhimi.com) 📍 Tehran, Iran

## Education

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- [Sharif University of Technology](#)

Tehran, Iran

*B.Sc. in Computer Engineering*

*September 2020 – February 2025*

*Supervisor: [Dr. Hamid Beigy](#)*

- **GPA:** 18.72 / 20

- **Courses (Grades out of 20):**

- \* Natural Language Processing (Graduate Course) - 19.8

- \* Fundamentals of 3D Computer Vision - 18.7

- \* Modern Information Retrieval - 20

- \* Machine Learning - 19.6

- \* Artificial Intelligence - 19.6

- \* Linear Algebra - 20

- \* Engineering Probability and Statistics - 20

- \* Advanced Programming - 20

- \* Fundamentals of Programming - 20

- **Teaching Assistants:**

- \* Natural Language Processing (Graduate Course)

- \* Generative Models (Graduate Course)

- \* Modern Information Retrieval (3 Semesters)

- \* Machine Learning (4 Semesters)

- \* Artificial Intelligence (3 Semesters)

- \* Linear Algebra

- \* Engineering Probability and Statistics

- \* Database Design (5 Semesters, 3 as Head TA)

- \* Mobile Programming (Head of iOS Homework)

- \* Web Programming

- \* Software Testing

- \* Advanced Programming (3 Semesters, 2 as Head of a Homework)

- \* Fundamentals of Programming (3 Semesters, 1 as Head of a Homework)

- \* Theory of Machines and Languages

- \* Computer Simulation

- \* Computer Networks

- \* Computer Structure and Machine Language

## Research Interests

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• Natural Language Processing (LLMs)    • Computer Vision    • Deep Learning    • Machine Learning

## Work Experiences

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- **Artificial Intelligence Intern**

[Sokhan AI](#)

*Internship*

*June 2024 – September 2024*

- Focused on Automatic Speech Recognition (ASR) systems, specializing in fine-tuning [Whisper model](#) with public and proprietary Persian datasets.

- Achieved an approximately **10% reduction in Word Error Rate (WER)**, outperforming both the company's previous ASR system and fine-tuned open-source versions of Whisper.

- Contributed a bug-fix [pull request to Hugging Face's Transformers library](#), which was merged, resolving an issue encountered during Whisper model fine-tuning that was consistent with similar reported issues.

- After the internship, continued part-time to finalize ASR evaluation pipeline, benchmarks, and documentation, and hand off a reproducible training and evaluation setups.

- **Software Development Intern**

[Rahnema College](#)

*Internship*

*August 2022 – November 2022*

- Selected from nearly **900 participants** for this Tapsi-sponsored boot camp.

- Gained experience in **Front-End** (TypeScript, React.js), **Back-End** (Node.js), **Android Development** (Kotlin), and **DevOps** (Docker, CI/CD).
- Worked as part of the front-end team on the [FPL project](#) alongside five other team members.

## Research Experiences

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- **Number Understanding in LLMs** Qatar Computing Research Institute  
*Supervisor: [Dr. Ehsaneddin Asgari](#) (QCRI)* April 2025 – Present
  - Studying LLM numeric reasoning across different domains.
  - Building benchmarks and analyzing error patterns.
  - Exploring prompting, data augmentation, and light fine-tuning to boost performance.
- **AI-Driven Referee Recommendation System for [Scientia Iranica](#) Journal** Sharif University of Technology  
*Supervisor: [Dr. Shohreh Kasaei](#) (IP Lab)* February 2024 – Present
  - Contributing to an AI project for [Scientia Iranica](#), a journal of Sharif University of Technology.
  - Developing an AI model to **automate referee selection** for submitted articles, streamlining the peer-review process.
  - Designed an AI-based system to identify professors' expertise based on their published papers.
- **Abductive Reasoning in LLMs** Sharif University of Technology  
*Supervisors: [Dr. Mohammad Hossein Rohban](#) (RIML Lab) and [Dr. Mahdi Jafari Siavoshani](#) (INL Lab)* May 2025 – August 2025
  - Conducted structured literature review on abductive reasoning, from formal foundations to applications in LLMs.
  - Compiled datasets and surveyed state-of-the-art papers.
  - Ran preliminary evaluations of LLMs on abductive benchmarks.
- **Research Survey on Compositional Problems of Stable Diffusion Models** Sharif University of Technology  
*Supervisors: [Dr. Mahdieh Soleymani Baghshah](#) (ML Lab) and [Dr. Mohammad Hossein Rohban](#) (RIML Lab)* October 2023 – April 2024
  - Conducting a research survey on methods to address compositional challenges (e.g., object relationships and positional consistency) in stable diffusion models.

## Highlighted Projects

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- **[LLMs' Citation Benchmark](#)** July 2024 – August 2024  
*Sharif University of Technology*
  - Final project for the Natural Language Processing course.
  - Built a system to **evaluate citation accuracy** in LLMs.
  - Experimented with multiple **prompt designs** to improve citation precision.
  - **Developed new metrics** to assess citation reliability.
- **[Llama 3 LoRA Fine-Tuning](#)** July 2024 – August 2024  
*Sharif University of Technology*
  - Completed as the final homework for the Natural Language Processing course.
  - Created a [dataset](#) focused on gender-neutralization.
  - Performed **LoRA** fine-tuning on **Llama 3** with the gender-neutral dataset.

- [Add Validation for Maximum Sequence Length in Whisper Model of Hugging Face's Transformers Library](#) August 2024 – September 2024  
*Sokhan AI*
  - Introduced a validation check for the [Whisper model in Hugging Face's Transformers library](#) to ensure label sequence length does not exceed maximum token length.
  - Enhanced model robustness and maintained consistent input dimensions.
  - Implemented tests to verify the validation mechanism.
- [Modern Information Retrieval](#) February 2022 – August 2023  
*Sharif University of Technology*
  - Comprehensive project for Modern Information Retrieval at Sharif University of Technology, completed in three phases.
  - **Phase 1:** Implemented retrieval algorithms (Vector Spaces, Okapi BM25) and data compression, then evaluated them.
  - **Phase 2:** Added classification methods (e.g., neural networks, language models) and enhanced the search engine with evaluations.
  - **Phase 3:** Developed a web crawler for [semanticscholar.org](#), implemented personalized PageRank, author ranking, a recommender system, and designed a user interface for the search engine named **Amoogle**.

## Honors and Awards

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- **Third Place** in Sharif University of Technology Table Tennis Championship (2025)
- **Selected Athlete**, Sharif University of Technology Table Tennis Team, 16th National Students' Sports Olympiad (2024)
- **Direct Master's Program Candidate** in Artificial Intelligence, Sharif University of Technology – *Highly competitive program for top-performing students* (2023)

## Volunteering Experiences

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- **Events at Sharif University of Technology:**
  - **Scientific Staff** - [Rayan AI Global Contest](#) (2024): Focused on Anomaly Detection.
  - **Technical Staff** - [Gamein](#) (2024): Front-End Web Developer.
  - **Technical Staff** - She'r ta Code (2024): Front-End Web Developer.
  - **Technical Staff** - [ICPC](#) Asian Regional, Tehran Site (2024, 2023, 2022): Supported technical operations.
  - **Technical Staff** - [Winter Seminar Series \(WSS\)](#) (2023): Front-End Web Developer.
  - **Technical Staff** - [CodoCodile](#) (2023): Front-End Web Developer.
  - **Media Staff** - [League of Coders \(LoC\)](#) (2022): Managed media coverage.
  - **Executive Staff** - [HardWar](#) (2022): Supported event execution.
  - **Branding Staff** - [SharifGame](#) (2021): Assisted in branding initiatives.
  - **Presenter** - Linux & Computer Workshops, [Saboo](#) (2021): Led workshop presentations.
- [Introduction to Programming and Algorithms: A Collaborative High School Outreach Course](#)
  - Developed in collaboration with **Sharif University of Technology** and **Quera** to introduce high school students to programming and algorithms.
  - Engaged around **2000 students**, supported by a team of approximately **100 teaching staff**.
  - Contributed by writing textbooks, creating practical exercises, and mentoring a student group to enhance their learning.
  - Recognized as **one of the top mentors** for dedication and impactful contributions to student learning.

## Other Courses

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- [Advanced Concepts in AI: System 2 AI – Sharif University of Technology](#) *Audited Graduate Course, Sp 2025*
- [Deep Learning for Computer Vision – Stanford University](#) *Self-study*

## Technical Skills

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- **Programming Languages:** Python, JavaScript, TypeScript, Java, Swift, R, C, SQL, Verilog
- **Python Libraries for AI and Data Science:** PyTorch, TensorFlow, Hugging Face Libraries (Transformers, Datasets, PEFT, Evaluate), OpenCV, scikit-learn, NLTK, NumPy, Pandas, Matplotlib, Plotly
- **Web Technologies:**
  - **Front-End:** Next.js, React.js
  - **Back-End:** Node.js, FastAPI, PostgreSQL, Redis