# Erfan Shahabi

# Al Software Engineer

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#### **EDUCATION**

University Of Tehran

Sep 2024 - Present

Tehran Iran

M.Sc in Information Technology Engineering

Tehran, Iran

Supervisor: Dr. Azadeh Shakery

Islamic Azad University, Science and Research Branch

Sep 2019 - Aug 2023

B.Sc in Industrial Engineering, GPA: 4/4 (18.07/20)

Tehran, Iran

Supervisor: Dr. Abbas Saghaei

## **EXPERIENCES AND COURSES**

# **Natural Language Processing**

University Of Tehran - Supervisor: Dr. Hesham Faili

- Progressed from fundamental NLP concepts to advanced techniques
- Implemented a chatbot as the final project using tool-use strategies
- · Utilized APIs, Transformers, Hugging Face, Langchain, Langgraph, and agents

## **Large Language Models**

University Of Tehran - Supervisors: Dr. MJ Dousti, Dr. Y Yaghoob Zadeh

- Gained strong skills working with large language models (LLMs) through multiple practical projects
- · Worked extensively with APIs, Transformers, Hugging Face, Langchain, Langgraph, and agents
- Developed use cases showcasing model integration and API utilization

## **Intelligent Information Retrieval**

University Of Tehran - Supervisor: Dr. Azadeh Shakery

- Started with ad-hoc retrieval methods and embeddings
- Worked with BERT models for improved retrieval performance
- Explored the application of LLMs in retrieval-augmented generation (RAG)

## **Advanced Data Mining**

University Of Tehran - Supervisor: Dr. Azadeh Shakery

- · Learned data fundamentals including cleaning and preprocessing
- · Covered advanced topics such as data cubes, classification, clustering, and deep learning applications
- Applied techniques in real-world datasets

## **Social Networks**

University Of Tehran - Supervisor: Dr. Masoud Asadpour

- · Studied graph theory, centrality measures, and community detection
- Applied concepts to analyze real-world network data through projects

#### HIGHLIGHTED PROJECTS

#### **LLMs Course Final Project**

User Simulation for Evaluating and Improving Conversational Recommender Systems Using LLMs

## **NLP Course Final Project**

• Chat Food: Building a Food and Restaurant Assistant Chatbot Based on LLMs Using LangGraph and React

### **Bachelor Thesis**

• Used Car Price Prediction Based on Manufacturing Year and Mileage Using Machine Learning Methods

#### TECHNICAL SKILLS

- Soft Skills: Teamwork, Meeting Tight Deadlines
- Programming Languages: Python, Javascript
- Large Language Models: Hugging Face, LangChain, Lang graph, LangFuse, Unsloth, PEFT, Datasets, TRL
- Databases: ElasticSearch, Milvus, lanceDB, Redis, PostgreSQL
- Machine Learning: PyTorch, Scikit Learn, evaluate, TensorFlow
- Retrieval: Sentence Transformers, Lexical Retrieval, Semantic Retrieval, ColBERT, BM25