Mohammad Naeimi
COMPUTER SOFTWARE ENGINEER

 Department of Computer Engineering, Amirkabir University of Technology (AUT) - Tehran Polytechnic, Tehran, IRAN

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 MhmdNmi | MhmdNmi | Mohammad Naeimi

Research Interests

⟐ AI/Machine Learning	⟐ Deep Learning & Neural Networks	⟐ Natural Language Processing (NLP)
⟐ IR/Recommender Systems	⟐ Graph Neural Networks (GNNs)	⟐ Data Science

Education

Master of Science (M.Sc.) in Computer Software Engineering *Tehran, Iran*
AMIRKABIR UNIVERSITY OF TECHNOLOGY (AUT) - TEHRAN POLYTECHNIC → USNEWS, QS, TIMES *Sep. 2022 - Oct. 2024*
- Thesis: **Improving Fairness in Recommender Systems using Regularization**
- Supervisor: **Dr. Mostafa H. Chehreghani**

Bachelor of Science (B.Sc.) in Computer Engineering *Isfahan, Iran*
ISFAHAN UNIVERSITY OF TECHNOLOGY (IUT) → USNEWS, QS, TIMES *Sep. 2018 - Sep. 2022*
- Thesis: **Converting Genome to Gene Expression in Cancer Cells with CycleGAN**
- Supervisors: **Dr. Mohammad Hossein Manshaei** & **Dr. Mehran Safayani**

High School Diploma in Natural Sciences Discipline *Kashan, Iran*
NATIONAL ORGANIZATION FOR DEVELOPMENT OF EXCEPTIONAL TALENTS (NODET) *Sep. 2013 - Jun. 2017*

Work Experience

Back-End Web Developer *Kashan, Iran*
MATNO COMPANY *May. 2021 - Sep. 2022*
- **Tasks:** Back-end Projects, SQL & No-SQL Databases, Web Scraping, Telegram Bot
- **Skills:** Programming, Web Development, Teamwork, Problem-Solving, Responsibility, Communication
- **Tools:**
  - NodeJS, Docker, GIT
  - Frameworks: NestJS, AdonisJS, ExpressJS, Django
  - Databases: PostgreSQL, MySQL, MongoDB, Redis

Research Experience

Research Assistant *Tehran, Iran*
DATA SCIENCE RESEARCH LABORATORY,
UNDER THE SUPERVISION OF **DR. MOSTAFA H. CHEHREGHANI**, *Jan. 2024 - Oct. 2024*
DEPARTMENT OF COMPUTER ENGINEERING, AMIRKABIR UNIVERSITY OF TECHNOLOGY (AUT) - TEHRAN POLYTECHNIC
- Conduct Research, Develop & implement AI Models, Compile results, Provide progress reports
- Deep Learning, Data Science, Recommender Systems, Graph Neural Networks, Natural Language Processing
- **Improving Fairness in Recommender Systems using Regularization**
  In this research, I leveraged different methods of recommender systems and incorporated diverse side information to improve the fairness and performance metrics of recommender systems. I worked on different methods such as loss regularization, hybrid recommender system methods, and natural language processing methods. I aimed to deepen the understanding of user preferences and provide more accurate and personalized recommendations. This research demonstrates how innovative approaches can be used to optimize recommender systems.

Undergraduate Research Assistant *Isfahan, Iran*
GAME THEORY AND MECHANISM DESIGN (GTMD) RESEARCH LABORATORY,
UNDER THE SUPERVISION OF **DR. MOHAMMAD HOSSEIN MANSHAEI**, *Mar. 2022 - Sep. 2022*
DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING, ISFAHAN UNIVERSITY OF TECHNOLOGY
- Conduct Research, Program & Run AI Models, Summarize Findings, Prepare Progress Reports
- Deep Learning, Data Science, Generative Adversarial Networks, Computational Biology, Image Processing
- **Converting Genome to Gene Expression in Cancer Cells with CycleGAN**
  For this project, I leveraged two critical datasets from the Cancer Genome Atlas (TCGA) project—namely, the gene expression dataset and the somatic mutation dataset (SNP). Employing a cutting-edge method known as DeepInsight, I transformed these datasets into image representations. Subsequently, by implementing a robust CycleGAN and rigorously testing its functionality, I utilized the transformed images derived from the TCGA datasets as the training data. My objective was to achieve a meaningful conversion between the two distinct dataset domains, thereby contributing to the advancement of understanding gene expression patterns in cancer cells.

Undergraduate Research Assistant *Isfahan, Iran*
OPERATING SYSTEMS GROUP UNDER THE SUPERVISION OF **DR. MOHAMMAD REZA HEIDARPOUR**, *Mar. 2021 - Aug. 2021*
DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING, ISFAHAN UNIVERSITY OF TECHNOLOGY
- Conduct Research, Run Simulations, Summarize Findings, Prepare Progress Reports
- Operating Systems, Embedded Systems, Microprocessors
- **Porting FreeRTOS on Raspberry Pi 3B (Simulating & Porting FreeRTOS)**
  I actively contributed to the FreeRTOS Porting project, demonstrating my proficiency in embedded systems and real-time operating systems. I successfully simulated FreeRTOS and executed a porting onto the ATmega32 microcontroller. Subsequently, in this project we launched the real-time operating system, FreeRTOS, on Raspberry Pi 3B. After running the test scenarios, we collect the results table and investigate the processing status of this operating system. Calculating the processing power of the combination of the FreeRTOS operating system and different hardwares can be used in various applications.

Teaching Experience

Teaching Assistant of Web Search & Information Retrieval Course
UNDER THE SUPERVISION OF **DR. SAEEDEH MOMTAZI**,
DEPARTMENT OF COMPUTER ENGINEERING, AMIRKABIR UNIVERSITY OF TECHNOLOGY (AUT) - TEHRAN POLYTECHNIC
- Teaching, Programming, AI/Machine Learning, Information Retrieval, Recommender Systems, Data Analysis

Tehran, Iran

Fall 2024, Fall 2025

Teaching Assistant of Natural Language Processing Course
UNDER THE SUPERVISION OF **DR. SAEEDEH MOMTAZI**,
DEPARTMENT OF COMPUTER ENGINEERING, AMIRKABIR UNIVERSITY OF TECHNOLOGY (AUT) - TEHRAN POLYTECHNIC
- Teaching, Programming, AI/Machine Learning, Natural Language Processing

Tehran, Iran

Spring 2024

Teaching Assistant of Operating Systems Course
UNDER THE SUPERVISION OF **DR. MOHAMMAD REZA HEIDARPOUR**,
DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING, ISFAHAN UNIVERSITY OF TECHNOLOGY (IUT)
- Teaching, Programming, Operating Systems, Algorithms, Linux, LaTeX

Isfahan, Iran

Fall 2021

Teaching Assistant of Design & Analysis of Algorithms Course
UNDER THE SUPERVISION OF **DR. ZEINAB MALEKI**,
DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING, ISFAHAN UNIVERSITY OF TECHNOLOGY (IUT)
- Teaching, Programming, Algorithms, Data Structures, LaTeX

Isfahan, Iran

Spring 2021

Teaching Assistant of Basic Programming Course
UNDER THE SUPERVISION OF **DR. ELHAM MAHMOUDZADEH**,
DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING, ISFAHAN UNIVERSITY OF TECHNOLOGY (IUT)
- Teaching, Programming, Algorithms, C/C++

Isfahan, Iran

Fall 2019

Certificates

Deep Neural Networks with PyTorch
COURSERA - IBM

Online
Jul. 2023

Applied Machine Learning in Python
COURSERA - UNIVERSITY OF MICHIGAN

Online
May. 2021

Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning
COURSERA - DEEPLEARNING.AI

Online
Apr. 2021

Project-oriented course in Web Development with PHP
QUERA COLLEGE (AN IRANIAN PROGRAMMING TRAINING PLATFORM)

Online
Mar. 2021

Introduction to Artificial Intelligence (AI)
COURSERA - IBM

Online
Feb. 2021

Advanced Python programming and Object-oriented thinking course
QUERA COLLEGE (AN IRANIAN PROGRAMMING TRAINING PLATFORM)

Online
Jan. 2019

Skills

Knowledge	Algorithms, AI/ML/DL, Data Science, Recommender Systems, NLP, Information Retrieval, GANs, GNNs
Programming	Python (Advanced), JavaScript/TypeScript (Advanced), C/C++ (Intermediate), SQL (Intermediate), PHP (Basic)
Frameworks/Libraries	TensorFlow, Keras, Scikit-Learn, PyTorch, NLTK, NumPy, pandas, Matplotlib
Web development	NodeJS, AdonisJS, NestJS, Django
Databases	PostgreSQL, MySQL, Microsoft SQL Server, Metabase, Redis, MongoDB
Technologies	GIT, Docker, LaTeX
Operating Systems	Windows, Linux (Ubuntu, Kali)
Soft Skills	Teamwork, Problem-Solving, Responsibility, Communication, Flexibility
Languages	**Persian** (Native Proficiency), **English** (Full Professional Proficiency), **French** (Elementary Proficiency)

Relevant Courses

GRADUATE COURSES | Amirkabir University of Technology (AUT) - Tehran Polytechnic
Neural Computing & Deep Learning (Fall 2023), **Complex Networks Analysis** (Fall 2023), **Distributed Systems** (Fall 2023),
Big Data Analytics (Spring 2023), **Natural Language Processing** (Spring 2023), **Advanced Algorithms** (Spring 2023),
Cloud Computing (Spring 2023), **Web Search and Information Retrieval** (Fall 2022)

UNDERGRADUATE COURSES | Isfahan University of Technology (IUT)
Software Engineering I, II (Spring 2021, Spring 2022), **Computer Networks I, II** (Spring 2020, Fall 2021),
Machine Learning Fundamentals (Fall 2021), **Artificial Intelligence** (Spring 2021), **Design & Analysis of Algorithms** (Fall 2020),
Operating System Principles (Fall 2020), **Microprocessor** (Fall 2020), **Computer Architecture & Organization** (Spring 2020),
Data Structures (Spring 2020), **Theory of Formal Languages** (Spring 2020)

Hobbies & Interests

Keeping up with the latest Developments in Technology	Learning a New Skill

Watching Movies	Listening to Music	Going to the Gym	Cycling	Swimming