

ALI NIKKHAH

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INTERESTS

Artificial Intelligence

Computer Vision & Generative Models

Natural Language Processing & Vision-Language Models

Digital Electronics

Embedded Systems & IoT (Internet of Things)

ASIC Design & FPGA (Field-Programmable Gate Arrays)

EDUCATION

Sharif University of Technology

September 2020

B.S. in Electrical Engineering with a specialization in Digital Systems

Overall GPA: 3.76

GPA in specialized courses: 3.91*

Iranian University Entrance Exam (Konkour)

August 2020

Ranked **14th** in Mathematics & Physics entrance exam

Among the top **0.01%** of candidates

SKILLS

Language	IELTS Band 8.0 (Listening 9.0 , Reading 9.0 , Writing 7.0 , Speaking 7.5)
Hardware	Verilog, VHDL, HSpice, Matlab
Deep Learning	PyTorch, TensorFlow, Keras, OpenCV, Scikit-learn
Visualization	Metabase, Grafana, Power BI, TensorBoard, Matplotlib, Seaborn
Big Data	PySpark, Luigi, Pandas, Numpy, Spark, Scala
CI/CD & Orchestration	GitLab, Docker, Kubernetes

SELECTED COURSES & PROFESSIONAL CERTIFICATIONS

Online	Parallel Programming and Big Data Analysis by EPFL Machine Learning Specialization by DeepLearning.ai Deep Learning Specialization by DeepLearning.ai Introduction to Self-Driving Cars by University of Toronto Mathematical Concepts of Machine Learning by Imperial College London
University	Deep Learning*, Machine Learning, Foundations of Data Science Natural Language Processing*, ASICs & FPGA, Microcontrollers Real-Time Embedded Systems*, Analog Electronics

1. Courses related to AI and Digital Electronics **2.** Master's level courses.

SELECTED RESEARCH EXPERIENCE

Spread Time CDMA Transceiver Chip

Research Assistant

December 2022 - Present

Sharif University, Tebran

- Investigated methods for implementing and optimizing FFT, Register banks, FIR Filters, and SPI
- Developed Verilog code for modules and tested using simulation testbenches
- Programmed FPGA and validated the correctness and precision of outputs
- Implemented and tested ASIC modules

Multi-Agent Reinforcement Learning for Investment

Research Assistant

April 2023

Dr. Amir Mirzaenia (Link)

- Worked on various multi-agent reinforcement learning algorithms
- Investigated strategies to mitigate catastrophic forgetting in RL models

Video Action Classification Using Transformer-Based Methods

Researcher

November 2023

L3S Research Center (Link)

- Worked on reducing background and texture dependency in video classifiers
- Investigated appearance-free classification using transformer models

TEACHING EXPERIENCE

Circuit Theory 1 & 2

Head Teaching Assistant

Dr. Siavash Bayat

Sharif University (Link)

- Developed and graded exams and assignments
- Assisted in creating educational materials (homework, slides)

Generative Models

Teaching Assistant

Dr. Sajjad Amini

Sharif University (Link)

- Developed and graded exams and assignments
- Mentored students on final course projects

Analog Electronics 1, 2, 3

Teaching Assistant

Dr. Fatemeh Akbar

Sharif University (Link)

- Developed and graded exams and assignments

Foundations of Data Science

Teaching Assistant

Prof. Babak Khalaj

Sharif University (Link)

REFERENCES

Prof. Babak Khalaj

Professor of Electrical Engineering

Sharif University

Dr. Fatemeh Akbar

Assistant Professor of Electrical Engineering

Sharif University

Dr. Amir Mirzaenia

Assistant Professor of Computer Science & Engineering

University of North Texas