



CONTACT

✉ farajloo97@gmail.com

in fatemeh-farajlou

☎ +98 919 891 1883

SKILLS

c/c++ 5+ yrs

VHDL/Verilog 3+ yrs

Python 3+ yrs

Machine Learning 3+ yrs

Deep Learning 2+ yrs

Openmp 1+ yrs

MPI 1+ yrs

TOOLS

Vitis HLS 2+ yrs

Vivado 3+ yrs

CodeVisionAVR 3+ yrs

Hspice 2+ yrs

Intel Parallel Studio 2+ yrs

Fatemeh Farajlou

Hardware Engineer

EDUCATION

M.Sc. - Computer Engineering & Computer Architecture

2020 - Present

Amirkabir University of Technology, Tehran, Iran (Tehran Polytechnic)

Thesis Title: parallel computing architecture for accelerating leak detection in water distribution networks with the k-nearest neighbor algorithm

B.Sc. - Electrical Engineering(Electronic)

2015 - 2019

University of Shahid Rajaei, Tehran, Iran

Diploma in Mathematics and Physics

2014 - 2010

Nodet(National Organization for Development of Exceptional), Tehran, Iran

PROFESSIONAL EXPERIENCE

Lecturer

Fall 2023

AmirKabir University of Technology (Tehran Polytechnique)

Logic Lab

Teacher assistant

Fall 2023

AmirKabir University of Technology (Tehran Polytechnique)

Re-configurable Computing Systems

Teacher assistant

spring 2022

AmirKabir University of Technology (Tehran Polytechnique)

Low Power Design

Teacher assistant

Fall 2023

AmirKabir University of Technology (Tehran Polytechnique)

Artificial intelligence

PUBLICATIONS

LANGUAGE

Persian: Native
English: fluent

RESEARCH INTERESTS

FPGA Accelerators for AI

- Parallel Systems for Machine Learning Applications
- Heterogeneous Computing Platform for AI
- Energy Efficiency in AI and chip Design
- Custom Chip Design
- Compute in Memory for AI Accelerator Design
- New Memory Arch for AI

SELECTED COURSES

- Reconfigurable Computing (20/20)
- Advanced Computer Architecture (18/20)
- Machine Learning (18/20)
- Parallel Processing (16.7/20)
- Microprocessor (20/20)
- Reliable System Design (17/20)

REFERENCES

- **Dr.Morteza Saheb Zamani (Prof.)**, Department of Computer Engineering, Amirkabir University of Technology (Email: szamani@aut.ac.ir)
- **Dr.Mahmoud Momtazpour (Assis. Prof.)**, Department of Computer Engineering, Amirkabir University of Technology (Email: momtazpour@aut.ac.ir)
- **Dr.Mehdi Javanmardi (Assis. Prof.)**, Department of Computer Engineering, Amirkabir University of Technology (Email: mjavan@aut.ac.ir)

parallel computing architecture for accelerating leak detection in water distribution networks with the k-nearest neighbor algorithm
Fateme Farajlou, Morteza Saheb Zamani

In preparation

SELECTED ACADEMIC PROJECTS

A reconfigurable computing platform for image processing in robotics using PYNQ

DC Motor Control with PWM and Stepper Motor Control using AVR

Fault Injection and Analysis using Tetramax on a Sequential Logic Circuit

Image Denoising using Autoencoder

Sentiment Analysis on Large Text Data using NLP

Fraud Detection on imbalanced data using SVM/KNN (Dimensionality Reduction using PCA)

Performance /Power /Size Analysis using McPat and Gem5

Ultra-low Power metering system using ARM arch (Hardware Design)

CERTIFICATES

C programming language
Tehran Technical complex,Tehran, Iran

fall 2017

AVR microcontrollers
Tehran Technical complex,Tehran, Iran

spring 2018

ARM NXP
Tehran Technical complex, Tehran, Iran

Fall 2018

FPGA programming by VHDL
Technical and Vocational Education,Tehran, Iran

fall 2020

HONORS AND AWARDS

- Ranked Top 1% in Iranian University Entrance Exam For Masters In Computer Engineering(among 30,000 participants), Iran, 2020.
- Ranked Top 2% in Iranian University Entrance Exam For Bachelor In Mathematics and Physics Discipline(among 150,000 participants), Iran, 2014.