

Reza Ramezanpour

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Education

Sharif University of Technology

Bachelor of Science in Electrical Engineering, GPA: 3.76/4.00-17.57/20.00 (Ranked 45th among 162 students)

Tehran, Iran

2016 - now

Beheshti High School

Affiliated with National Organization for Development of Exceptional Talents [NODET], GPA:4,00/4.00

Ranked 4th in National University Entrance Exam among 200,000 competitors

Tehran, Iran

Fall 2011 - Fall 2016

Research Interests

- Big Data Analysis
- Machine Learning, Neural Networks
- Cryptography and Network Security
- Parallel and Distributed Computation
- ASIC/RTL Digital Circuit Design
- Internet of Things
- Signal Processing

Experience

Teaching Assistant, Logic Circuits

Lab Assistant and guiding students about circuit design and coding

Dr. Mohammadzade

September 2018 - January 2019

Teaching Assistant, Computer Architecture

Lab Assistant and guiding students about coding and simulating with ISE and Modelsim

Dr. Movahedin

January 2019 - June 2019

Teaching Assistant, Numerical Calculation

Theoretical Homework designing and assessing

Dr. Bayat

September 2019 - January 2020

Teaching Assistant, Object Oriented Programming

Computer Homework designing and assessing

Dr. Hashemi and Dr. Vahdat

January 2020 - July 2020

Advertisement Manager and Website Developer, NeuroScience Symposium

Webpage

Winter 2019

Internship, HardTech Startup

Internet of Things Internship

Webpage

Summer 2019

Selected Academic Projects

Single Cycle and Multi Cycle Implementation

Computer Architecture Course Project

Dr. Movahedeen

- Single cycle and Multi cycle implementation of MIPS architecture, in Verilog, under supervision of Dr. Movahedeen

IMDB Data Analysis

Probability and Statistics Course Project

Dr. Maddahali

- Exploring the database of imdb movies , working with statistical parameters and test, estimating imdb score, in Matlab, under supervision of Dr. Maddahali

Checkers Game

Dr. Hashemi

Java Programming Course Project

- Checkers game with java language and with graphic features with java FX with all features of main game under supervision of Dr.Hashemi

Finding nearest neighbor distance histogram (with GPU)

Dr. Hashemi

Parallel Programming and Architectures Course Project

- Analysis distance of 10000 data with 128 dimension from 1000000 data with same number of dimension and finding histogram of these distances with GPU for each query under supervision of Dr.Hashemi

Voice Recorder and real-time pitch shifter

Dr. Haj-Sadeghi

FPGA/ASIC Systems Design Course Project

- Building a voice recorder that records and plays back 8-bit digital audio samples, in Verilog, under supervision of Dr. Haj-Sadeghi

P2P Channel Simulator

Dr. Pakravan

Data Networks Course Project

- Designing and simulating peer to peer channel and define its routing protocols with socket programming , in Python, under supervision of Dr. Pakravan

PCIe and DDR2 SDRAM Controller Simulation in ISE

Dr. Movahedeen

Computer Interface Circuits Course Project

- Simulating PCI Express and DDR2 sample codes in ISE and analyzing transactions base on their standards, in Verilog, under supervision of Dr. Movahedeen

Object Recognition in Images with Keras and Tensorflow

Dr. Salehkaleybar

Machine Learning Course Project

- Implementing CNNs through a classification task on CIFAR-10 dataset using Keras Library, under supervision of Dr. Salehkaleybar

Designing KDC for safe communication in LAN

Dr. Mirmohseni

Cryptography and Network Security Course Project

- Designing and simulating a safe KDC protocol that is immune from replay attack and analyzing and implementing all possible attacks on this protocol base on possible attacks on Dolev-Yau channel with Avispa/Spa, under supervision of Dr. Mirmohseni

Database Optimization

Dr. Gholampour

Bachelor Project

- Designing and optimizing a database model for traffic data, under supervision of Dr. Gholampour

Smart Positioning for IOT Application

Dr. Bayat Sarmadi

Work Project

- Cloud base platform for positioning and navigation in IOT Application, under supervision of Dr. Bayat Sarmadi

Hand Digit Recognition

Dr. Behrouzi

Signal and Systems Course Project

- Hand digit recognition base on image features, shadow reduction, machine learning algorithms and optimizing it on Neural network, in matlab and also python under supervision of Dr.Behroozi

ESP32 , Simple IOT project

HardTech Internship

Work Project

- Azure link : Azure Repo

Stock Prices Prediction

Work Project

- Predicting different factors of the stock market with Machine Learning and Quandl Dataset

Data Analysis of Tehran's Traffic Data Course Project

Big Data Analysis

- Recommending new paths for each individual car using Frequent itemsets Algorithm (FP-Growth)
- Finding and clustering cars with similar driving patterns using LSH
- Finding important points(Traffic cameras) using PageRank
- Clustering Traffic cameras using Community Detections algorithm (GraphX)
- Designing a Recommender System to suggest new paths using ALS

Selected Courses

Fundamentals of Programming: 20	Dr. Mostafazadeh
Numerical Calculation: 19.4	Dr. Bayat
Java Programming: 20	Dr. Hashemi
Parallel Programming and Architectures: 20	Dr. Hashemi
FPGA/ASIC Systems Design: 19.5	Dr. Haj-sadeghi
Communication Systems: 17.0	Dr. Behrouzi
Computer Architecture and Microprocessor: 20	Dr. Movahedeen
Data Structure and Algorithm Analysis: 16	Dr. Salehkaleybar
Data Networks: 18.5	Dr. Pakravan
Machine Learning: 19.0	Dr. Salehkaleybar
Microprocessor Systems Design: 17.0	Dr. Haj-Sadeghi
Cryptography and Network Security: 18.4	Dr. Mirmohseni
Computer Interface Circuits: 20	Dr. Movahedeen
Big Data Analysis: 19.4	Dr. Gholampour

Computer Skills

Programming Languages

- C/C++, Python, JAVA, Scala, Assembly

Circuit Design Languages and Programs

- Verilog, Altium Designer, PSPICE, HSPICE, Proteus, Model-sim, Xilinx ISE

Web Development

- HTML, CSS, JS, FLASK, MYSQL, MongoDB, Django

Assembly and Micro-controller

- MIPS, AVR, ARM, x86, Arduino

Linux

- Bash Scripting

Documentation

- LATEX, Microsoft Office

Others

- MATLAB, CUDA