

# Reza Ramezani

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## Education

### Sharif University of Technology

Bachelor of Science in Electrical Engineering

Tehran, Iran

2016 - Jan 2021

GPA: 3.76/4.00-17.57/20.00

### Beheshti High School

Affiliated with National Organization for Development of Exceptional Talents [NODET]

Tehran, Iran

Fall 2011 - Fall 2016

GPA: 4.00/4.00

## Achievements

- Ranked 4th in National University Entrance Exam for Bachelor Degree among 200,000 competitors
- Ranked 14th among 10,000 students in National University Entrance Exam for Master Degree
- Ranked 42th among 162 students in Sharif University of Technology's Electrical Engineering Department
- Member Of Iran's National Elites Foundation

## Research Interests

- Big Data Analysis
- Machine Learning, Neural Networks
- Parallel and Distributed Computation

## 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

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### Single Cycle and Multi Cycle Implementation

Dr. Movahedeen

Computer Architecture Course Project

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

### 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/Span, 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

### 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

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

## Computer Skills

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### 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