

# Reza Ramezanpour

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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
- Data Mining on Graphs

## 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

### 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. Under supervision of Dr. Gholampour

## Finding nearest neighbor distance histogram (with GPU)

*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](#)

## Object Recognition in Images with Keras and Tensorflow

*Machine Learning Course Project*

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

## Database Optimization

*Bachelor Project*

- Designing and optimizing a database model for traffic data, under supervision of [Dr. Gholampour](#)

## Hand Digit Recognition

*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. Behrouzi](#)

## Accident Severity Prediction

*Work Project*

- Using an Efficient-B7 model for predicting crash severity in highway between Lowshan and Qazvin

## Single Cycle and Multi Cycle Implementation

*Computer Architecture Course Project*

- Single cycle and Multi cycle implementation of MIPS architecture, in Verilog, under supervision of [Dr. Movahedeen](#)

## Checkers Game

*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](#)

## Voice Recorder and real-time pitch shifter

*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

*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

*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](#)

## Designing KDC for safe communication in LAN

*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](#)

## Smart Positioning for IOT Application

*Work Project*

- Cloud base platform for positioning and navigation in IOT Application, under supervision of [Dr. Bayat Sarmadi](#)

## Stock Prices Prediction

Work Project

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

## 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, Proteos, 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

## Language Skills

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Persian: ●●●●●●  
English: ●●●●●●  
Arabic: ●●●●●●