Reza Ramezanpour

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Education

Sharif University of Technology — *Tehran, Iran*

Bachelor of Science in Electrical Engineering — *2016 - jan 2021*

GPA: 3.76/4.00-17.57/20.00

Beheshti High School — *Tehran, Iran*

Affiliated with National Organization for Development of Exceptional Talents [NODET] — *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 — *Dr. Mohammadzade*

Lab Assistant and guiding students about circuit design and coding — *September 2018 - January 2019*

Teaching Assistant, Computer Architecture — *Dr. Movahedin*

Lab Assistant and guiding students about coding and simulating with ISE and Modelsim — *January 2019 - June 2019*

Teaching Assistant, Numerical Calculation — *Dr. Bayat*

Theoretical Homework designing and assessing — *September 2019 - January 2020*

Teaching Assistant, Object Oriented Programming — *Dr. Hashemi and Dr. Vahdat*

Computer Homework designing and assessing — *January 2020 - July 2020*

Advertisement Manager and Website Developer, NeuroScience Symposium — *Webpage*

Winter 2019

Internship, HardTech Startup — *Webpage*

Internet of Things Internship — *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 clustring cars with similar driving patterns using LSH**
- **Finding important points(Traffic cameras) using PageRank**
- **Clustring 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 calssification 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 protocl 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

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, 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

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