

# Arghavan Zibae

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## Education

### Sharif University of Technology

Bachelor of Science in Electrical Engineering

Tehran, Iran

2016 - Jan 2021

GPA: 3.73/4.00-17.67/20.00

### Abureyhan Highschool

PRE-UNIVERSITY (CERTIFICATE AND HIGHSCHOOL DIPLOMA IN MATHEMATICS AND PHYSICS)

Tehran, Iran

Fall 2011 - Fall 2016

GPA: 4.00/4.00

## Achievements

- Ranked 63th in National University Entrance Exam for Bachelor Degree among 200,000 competitors
- Ranked 39th among 162 students in Sharif University of Technology's Electrical Engineering Department
- Member Of Iran's National Elites Foundation

## Research Interests

- Signal Processing
- Machine Learning, Neural Networks
- Parallel and Distributed Computation
- ASIC/RTL Digital Circuit Design
- Cryptography and Network Security

## 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, Object Oriented Programming

Programming Homework designing and assessing

Dr. Hashemi and Dr. Vahdat

January 2020 - July 2020

### Executive Manager, NeuroScience Symposium

Managing crews and preparing site of Symposium

Webpage

Winter 2019

## Selected Academic Projects

### simulation of first price auction with stable matching and efficient mechanisms

Dr. Mirmohseni and Dr. Ashtiani

Game Theory Course Project

- simulation of hospitalization auction of covid-19 patients based on their probability of death, the time they should spend in hospital, their insurance type and their station of disease. This auction had been simulated based on 2 different mechanism (stable matching and efficient mechanisms) and some different probability parameters too.

## 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

## IMDB Data Analysis

*Dr. Maddahali*

*Probability and Statistics Course Project*

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

## Minesweeper Game

*Dr. Rivade*

*C Programming Course Project*

- Minesweeper game with c language with all features of main game under supervision of Dr.Rivade

## 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

## Selected Courses

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<b>Fundamentals of Programming: 19.7/20</b>	<a href="#">Dr. Rivade</a>
<b>Probability and Statistics: 18/20</b>	<a href="#">Dr. Maddahali</a>
<b>Java Programming: 20/20</b>	<a href="#">Dr. Hashemi</a>
<b>Python Programming Lab: 18.8/20</b>	<a href="#">Dr. Hashemi</a>
<b>Parallel Programming and Architectures: 18.9/20</b>	<a href="#">Dr. Hashemi</a>
<b>FPGA/ASIC Systems Design: 18.5/20</b>	<a href="#">Dr. Haj-sadeghi</a>
<b>Signals and Systems: 17.9/20</b>	<a href="#">Dr. Behrouzi</a>
<b>Computer Architecture and Microprocessor: 20/20</b>	<a href="#">Dr. Movahedeen</a>
<b>Data Structure and Algorithm Analysis: 18/20</b>	<a href="#">Dr. Salehkaleybar</a>
<b>Data Networks: 17.5/20</b>	<a href="#">Dr. Pakravan</a>
<b>Machine Learning: 18.6/20</b>	<a href="#">Dr. Salehkaleybar</a>
<b>Game Theory: 18.4/20</b>	<a href="#">Dr. Mirmohseni and Dr. Ashtiani</a>
<b>Cryptography and Network Security: 17.5/20</b>	<a href="#">Dr. Mirmohseni</a>
<b>Logic Circuit: 19/20</b>	<a href="#">Dr. Mohammadzade</a>

## Computer Skills

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### Programming Languages

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

### Circuit Design Languages and Programs

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

### Web Development

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

### Assembly and Micro-controller

- MIPS, AVR, ARM, x86, Arduino

### Linux

- Bash Scripting

### Documentation

- LATEX, Microsoft Office

### Others

- MATLAB