Arghavan Zibaie

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Education

Sharif University of Technology — *Tehran, Iran*

Bachelor of Science in Electrical Engineering — *Sep 2016 - Feb 2021*

Digital System Design Field — *GPA: 3.73/4.00-17.67/20.00*

Aboureihan Highschool — *Tehran, Iran*

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

- **Control and System**
- **Game Theory and Applications**
- **Machine Learning**
- **Parallel and Distributed Computation**
- **Signal Processing / Image Processing**

Experience

Teaching Assistant, Logic Circuits — *September 2018 - January 2019*

Lab Assistant and guiding students about circuit design and coding

Teaching Assistant, Computer Architecture — *January 2019 - June 2019*

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

Teaching Assistant, Object Oriented Programming — *January 2020 - July 2020*

Programming Homework designing and assessing

Teaching Assistant, Object Oriented Programming — *January 2022 - July 2022*

Programming Homework designing and assessing, Providing course materials and slides

Executive Manager, NeuroScience Symposium — *Winter 2019*

Managing crews and preparing site of Symposium

Selected Course Projects

simulation of first price auction with stable matching and efficient mechanisms

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.

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.

IMDB Data Analysis

Probability and Statistics Course Project

- Exploring the database of imdb movies , working with statistical parameters and test, estimating imdb score.

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.

Minesweeper Game

C Programming Course Project

- Minesweeper game with c language with all features of main game.

Checkers Game

Java Programming Course Project

- Checkers game with java language and with graphic features with java FX with all features of main game.

Single Cycle and Multi Cycle Implementation

Computer Architecture Course Project

- Single cycle and Multi cycle implementation of MIPS architecture, in Verilog.

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.

P2P Channel Simulator

Data Networks Course Project

- Designing and simulating peer to peer channel and define its routing protocols with socket programming , in Python.

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.

Bachelor Project

Database Optimization

Database and Machine Learning

- Designing and optimizing a database model for traffic data. This database is used to query different patterns of traffic as fast as possible and to tune hyperparameters of a nueral netwrok to predict traffic intensity.

Selected Courses

Fundamentals of Programming: 19.7/20
Probability and Statistics: 18/20
Engineering Mathematics: 18.6/20
Java Programming: 20/20
Python Programming Lab: 18.8/20
Parallel Programming and Architectures: 18.9/20
FPGA/ASIC Systems Design: 18.5/20
Signals and Systems: 17.9/20
Computer Architecture and Microprocessor: 20/20
Data Structure and Algorithm Analysis: 18/20
Data Networks: 17.5/20
Machine Learning: 18.6/20
Game Theory: 18.4/20
Logic Circuit: 19/20

Computer Skills

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

Language Skills

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