Amirhesam Salimnia

Summer Internship

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Education

- **Bachelor of Science in Electrical Engineering** , University of Tehran, Tehran GPA (18.77/20) Sept 2016 – Present
  Minor in Computer Engineering, University of Tehran, Tehran GPA (18.23/20)
- **Diploma, Mathematics,** AE HighSchool, Tehran GPA (19.53/20) Sep 2012 – Jun 2016

Honors and Awards

- Silver Medal in Iranian National Physics Olympiad 2015
- Member of **Iran's National Elites Foundation** 2015
- Ranked 2^{nd} among about 120 undergraduate students of Electrical Engineering, University of Tehran Present

Research Experience and Notable Projets

Research Assistant Present
Implementing and improving a tracking system to solve **Multiple Object Tracking** paradigm in crowded scene using **CNN**s

Radiomics Fall 2017
Clustering data of NSCLC-Radiomics with a k-means algorithm to predict survival time of lung cancer patients

Line Tracker Robot Fall 2017
Line Tracker Robot designing by employing CNY70 sensors, DC motor, and AVR microcontroller.

Image Processing Spring 2018
Noise and motion artifacts reduction and also compression using implemented **JPEG** algorithm.

Implement "Twitter" in C++ Spring 2018
Design of application "Twitter" and its implementation using hierarchical **Object Orientation** and HTTP protocols in **POSTMAN**

Swipe Brick Breaker Spring 2018
Game development named "Swipe Brick Breaker" in **C++** using graphical library (RSDL).

Digital Logic Design Lab Spring 2018
Designing a VGA controller, a function generator, DAC and a digital oscilloscope using **Verilog** in **Alltera Quartus** and implementing it on an **FPGA** board

ACM Vahed Summer 2018
An online virtual course selection website to help students to preplan their courses and give feedback on the course schedule using **Django** framework

Heart Rate Monitoring System Fall 2018
Stress detection using heartbeat sensors and **AVR** microcontroller

Three Connected Tank Fall 2018
Liquid level control for industrial three tanks system using a **PID** control

Speaker Recognition Spring 2019
Designing a classifier to recognize speaker of a sound based on **Mel-frequency cepstrum**

Music Retrieval Summer 2019

Implementing an **identification system** for **Persian Music** based on Pitch-frequency histogram and **Metric Learning** methods

File Sharing System Fall 2019

Developing a **multi-threaded** file transfer application via **TCP** and **UDP** connections in **C**

Maze Problem Fall 2019

Solving maze problem using **Q-Learning**

Classification Problems Fall 2019

Designing classifiers for various data sets by implementing **SVM, Decision Tree, Bayesian Classifier, and Neural Network** from scratch

Decryption using Genetic Algorithm Spring 2019

Using **Genetic Algorithm** to find key of encrypted text

Chatting System Spring 2019

Developing a multi client chat system via **TCP** connections in **Python**

Mobile Pricing Spring 2019

Building **Regression Model** on mobile phone data set to fit an approximate estimation for the price model

Teaching Experience

Fall 2018 | **Teaching Assistant**
Electromagnetics : Instructor Prof. M. Shahabadi
› Oversaw students' assignments and graded them.

Spring 2019, Fall 2019 | **Teaching Assistant**
Linear Control Systems : Instructor Prof. A. Adhami, Prof. F. Bahrami
› Prepared projects and graded assignments.

Fall 2019, Spring 2020 | **Teaching Assistant**
Engineering Mathematics : Instructor Prof. A. Tale-Masouleh
› Oversaw students' assignments and graded them.

Fall 2019, Spring 2020 | **Teaching Assistant**
Introduction to Computer and programming : Instructor Prof. M.R. Hashemi, Prof. H. Moradi
› Prepared projects and graded assignments.

Fall 2019, Spring 2020 | **Teaching Assistant**
Engineering Probability and Statistics : Instructor Prof. B. Bahrak, Prof. M. Abolghasemi
› Oversaw students' assignments and graded them.

Spring 2020 | **Teaching Assistant**
Digital Signal Processing : Instructor Prof. M.A. Akhaey
› Oversaw students' assignments and graded them.

Fall 2020 | **Teaching Assistant**
Industrial Control : Instructor Prof. A. Kalhor
› Oversaw students' assignments and graded them.

Fall 2020 | **Teaching Assistant**
Intelligent Systems : Instructor Prof. R. Hosseini
› Oversaw students' assignments and graded them.

Selected Courses

Technical Language(20/20), **English Language**(20/20), **Engineering Probability and Statistics**(19.4/20), **Systems Analysis**(18.5/20), **Advance Programming**(18/20), **Linear Control Systems**(20/20), **Microprocessors 1**(20/20), **Digital Signal Processing**(19.2/20), **Linear Algebra**(17.75/20), **Data Structure and Algorithms**(20/20), **Data and Analysis of Algorithms**(20/20), **Operating Systems**(18.7/205), **Modern Control**(19.6/20), **Intelligent Systems**(20/20), **Computer Networks**(19.5/20, **Artificial intelligence** (20/20), **Digital and Nonlinear Control Systems** (20/20), **Operations Research** (Ongoing), **Neural Networks and Deep Learning** (Ongoing)

Computer Skills

Programming	C++(Advanced), MATLAB(Advanced), C(Advanced), Python(Advanced), Git(Intermediate), HTML(Intermediate), Django(Intermediate), CSS(Intermediate), Bootstrap(Intermediate), Assembly(Familiar)
Hardware Programming	Verilog(Intermediate), System Verilog(Intermediate), AVR(Intermediate), Arduino(Intermediate), ARM(Intermediate)
Simulation Softwares	Multisim(Advanced), Pspice(Familiar), Proteus(Familiar), Altera Quartus(Familiar), Modelsim(Intermediate)
Typesetting	LaTeX(Intermediate), Microsoft Word(Advanced)
OS	Linux(Intermediate), Windows(Advanced)
Databases	MySQL(familiar)

LANGUAGES

English *Fluent*
Persian *Native*