

Mahshid Alinoori

Contact Information

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Research Interests

Computer Music
Music Informatics
Machine Learning
Machine Listening
Speech Processing
Audio Signal Processing
Computational Creativity
Music Information Retrieval

Education

- 2013-2018 **Amirkabir University of Technology(Tehran Polytechnic)**, Tehran, Iran
B.Sc., Computer Engineering, Hardware
Thesis: Computation of Elementary Flux Modes using HW/SW Co-design and Implementation of Binary Approach, Under Supervision of Professor Saheb Zamani
GPA: 17.59/20 (3.57/4)
GPA(last 2 years): 18.81/20 (3.90/4)
Passed Credits: 141
- 2009-2013 **Roshangaran High school**, Tehran, Iran
Diploma in Mathematics and Physics
GPA: 19.90/20

Teaching Experiences

- Fall 2016 **Teaching Assistant:** Data Structures & Algorithms, AUT
Instructor: Dr. Dehghan
- Fall 2016 **Teaching Assistant:** Digital Design Automation, AUT
Instructor: Dr. Saheb Zamani
- Fall 2016 **Teaching Assistant:** Research Method & Report Writings, AUT
Instructor: Dr. Shiry Ghidary
- Fall 2013 **Teaching Assistant:** Physics(For pre-college students), Roshangaran High School
Instructor: Shahram Farhad

Research Experiences

- 2018-present **Research Assistant**, Tehran University
Under Supervision of Professor Bagher Babaali

Relevant Coursework

Educated Courses

Engineering Statistics: 19/20
Engineering Mathematics: 18.15/20
Signals & Systems: 17.33/20
Data Structures & Algorithms: 20/20
Principles of Database Design: 19.8/20
Operating System Design: 18/20
Advanced Computer Programming: 17.5/20
Research Methods & Report Writing: 20/20

Online Courses

Machine Learning, Stanford University
Deep Learning, deeplearning.ai
Audio Signal Processing in Music, Pompeu Fabra University and Stanford University
Generative Art and Computational Creativity, Simon Fraser University

Academic Projects

Bachelor Thesis

Computation of Elementary Flux Modes using HW/SW Co-design and Implementation of Binary Approach

Using C, Python, MATLAB, VHDL

Principles of Database Design

Design and Implementation of Online Public Transportation Database

Using Java, MySQL

Operating Systems

Design and Implementation of Process Migration on XV6 OS

Using C

Computer Networks(II)

Implementation and Simulation of ARQ Error Control Protocols

Using Java

Design of Algorithms

Implementation of Motion Planning Algorithm

Using Java

Data Structures & Algorithms

Design and Implementation of Huffman Compression using BST Data Structure

Using C++

Linear Control Systems

Design and Implementation of Automated Steering Control

Using MATLAB

Honors

- 2015-2018 Ranked **1st** among undergraduate hardware students at Department of Computer Engineering and IT, AUT
- 2013 Achieved **top 0.8%** place among all applicants for the University Entrance Nationwide Exam(Approximately 219000 applicants) in Math. and Eng., Iran
- 2013 Achieved **top 0.1%** place among all applicants for the University Entrance Nationwide Exam(Approximately 96000 applicants) in Foreign Languages (English), Iran
- 2008 Achieved **top 1.5%** place among all high school students in Scientific Olympiad on Mathematics(Approximately 1300 applicants), Tarbiat Modares University, Tehran, Iran

Technical Reports

- 2018 **M. Alinoori**, "Computation of Elementary Flux Modes using HW/SW Co-design and Implementation of Binary Approach" (In Persian), AUT
- 2016 **M. Alinoori**, "DDoS Defence in Cloud Computing using Content-oriented Network Architecture" (In Persian), AUT

Talks

- 2018 **M. Alinoori**, "Computation of Elementary Flux Modes using HW/SW Co-design and Implementation of Binary Approach" (In Persian), AUT
- 2017 **M. Alinoori**, "DDoS Attacks" (In English), AUT
- 2016 **M. Alinoori**, "DDoS Defence in Cloud Computing using Content-oriented Network Architecture" (In Persian), AUT

Work Experience

- 2017-2018 **Back-end Developer** at Papion
Food and Recipe Social Network called Sarashpaz Papion with more than 1 million users
- 2017 **President of Student Scientific Chapter**(Elected by votes of Students), Department of Computer Engineering and Information Technology, AUT

Extracurricular Activities

- May 2017 **Executive Director**, 9th Amirkabir Linux Festival
- Apr 2017 **Executive Director**, 4th Amirkabir Programming League(APL)
- Apr 2017 **Member of Executive Committee**, 2nd AUT Big Data Workshop
- Nov 2017 **Member of Executive Committee**, 17th Amirkabir International Collegiate Programming Contest(AUT ICPC), jointly with KTH - Royal Institute of Technology and Technical University of Munich
- Nov 2016 **Member of Executive Committee**, 16th Amirkabir International Collegiate Programming Contest(AUT ICPC), jointly with KTH - Royal Institute of Technology and Jagiellonian University

Technical Skills

Programming Languages

Python, Java, PHP, C/C++
HTML, CSS, Assembly, Bash Script

Hardware Description Languages

VHDL, Verilog

Database Management Systems

MySQL, MongoDB, PostgreSQL

Typesetting

L^AT_EX, Microsoft Word

Operating Systems

Windows, Linux(Ubuntu, Debian)

Softwares and Tools

Netbeans, CodeBlocks, PHPStorm, Pycharm
Orcad Pspice, Proteus, Xilinx Vivado, Modelsim
Cisco Packet Tracer, Wireshark
MATLAB, Simulink, MS Project

Frameworks and Scientific Tools

Pandas, NumPy, Scikit-learn, Keras
Tensorflow, libROSA, Laravel, Lumen

Languages

English: Fluent

TOEFL iBT: 104/120 (Reading: 27/30, Listening 30/30, Speaking: 24/30, Writing: 23/30)

Persian(Farsi): Native

Spanish: Level B2

Arabic: Fair

Hobbies

Playing Classical Guitar

Reading Books

Drawing

Movies

References

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