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# Mahtab Farrokh

## Undergraduate Hardware Engineering

### Interests

#### Professional

Internet of Things, Computer Networks, Android Programming, Graph theory

#### Personal

Violin, Pottery, Wood Handcraft

### Education

#### 2015 - 2019, B.Sc. in Computer Hardware Engineering

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran  
GPA(up to now): 17.13/20 Total Passed Credits: 50

#### 2008 - 2015, Diploma in Physics and Mathematics Discipline

Farzanegan 1, Tehran, Iran (NODET) Attended Iran National Olympiad in Computer Focused on Combinatorics , graph theory and c++ Programming. GPA: 19.36/20

### Honors and Awards

- Ranked top 0.4 % among more than 180,000 students participated in the nationwide entrance examination of undergraduate studies in Iranian universities (2015)
- Semi-finalist at National Mathematics Olympiad (March 2013)
- accepted for 2nd level of Kharazmi awards assessments(2011)
- Member of National Organization for Development of Exceptional Talents (NODET)(2007-2014)

### Teaching Experience

- Teacher Assistant, Introduction to Programming, Amirkabir University of technology, Under Supervision of Prof.Bakhshi (Fall-2016)

# Skills

## Programming

- Python 3
- VHDL
- C and C++
- Java
- Verilog

## Web and DB Technologies

- MySQL
- MongoDB
- Django
- HTML(Familiar)

## Operating Systems

- Linux
- Windows

## Typesetting

- L<sup>A</sup>T<sub>E</sub>X
- Vim
- Microsoft Word

## Others

- Docker
- Qt
- modelsim
- Eclipse
- IntelliJ
- Pycharm
- Android Studio

# Projects

- computer architecture : Design and implementation of a small modular processor, called SAYEH (Simple Architecture, Yet Enough Hardware) - VHDL
- Distributed Calculator implemented database part using MongoDB and docker - Python
- Data Structure : search engine using inverted index algorithm - Python.
- Data Structure : Finite state machine - Python.
- Logic Circuits : Traffic Light - Verilog.
- Advanced Computer Programming:
  - Implementation of a graphical game with multiplayer support and AI. Computer Player.(Strategic Game) - Java.
  - Implementation of Pacman game - Java.
  - Implementation of Arcade game - Java.
- Principles of Computer and Programming : living cell simulation - C.
- Implementation of Notepad using Qt - C++.
- Wind Tunnel for Educational purpose. Test room dimension 3000 cm<sup>3</sup>.
- Hovercraft modeling for physics workshop. Selected for 2nd level of Kharazmi awards assessment(2011)

## High Grades in undergraduate courses

- Data Structures & Algorithms - Dr.Dehghan - Fall 2017 - (20/20)
- Logic Circuits - Dr.Sedighi - Fall 2017 - (18.9/20)
- Electric Circuits - Dr.Khorsandi - Fall 2017 - (18.5/20)
- Advanced Computer Programming - Mr.Poorvatan - Spring 2016 - (18/20)
- Principles of Computer and Programming - Dr.Bakhshi - Fall 2015 - (20/20)

## Extra-Curricular Activities

- Elected as the President of Students Scientific Chapter(SSC), CEIT Department, Amirkabir University of Technology (Tehran Polytechnic)- 2017
- Member of Execution Committee, 9th National AUT Linux Festival - Spring 2017
- Member of Execution Committee, 8th National AUT Linux Festival - Spring 2016
- Member of Execution Committee, 2nd International AUT ACM ICPC - Fall 2016

## References

- Professor Bahador Bakhshi, Assistant Professor  
Computer Engineering and IT Department, Amirkabir University of Technology  
Email: bbakhshi@aut.ac.ir
- Professor Masoud Sabaei , Associate professor  
Computer Engineering and IT Department, Amirkabir University of Technology  
Email: sabaei@aut.ac.ir
- Professor Siavash Khorsandi , Associate professor  
Computer Engineering and IT Department, Amirkabir University of Technology  
Email: khorsandi@aut.ac.ir