



# Soroush Omidvar Tehrani

## Personal Data

Birth Place Mashhad, Khorasan Razavi Province, Iran  
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## Education

- 2017–2019 **M.Sc. in Computer Engineering (Network branch)**, *Department of Computer Engineering*, Ferdowsi University of Mashhad, Iran.  
- Total GPA: 17.53/20 (3.77/4)  
- Last year GPA: 18.53/20 (4/4)
- 2013–2017 **B.Sc. in Computer Engineering (Hardware branch)**, *Department of Computer Engineering*, Ferdowsi University of Mashhad, Iran.  
- Total GPA: 16.56/20 (3.29/4) → Ranked 2<sup>nd</sup>  
- Last 2 years GPA: 17.73/20 (3.69/4)

## Research Interests

**IoT-based Data Mining**  
**Artificial Intelligence**  
**IoT Security**

## Publications

- 2019 Extracting Effective Features for Descriptive Analysis of Household Energy Consumption using Smart Home Data  
2019 Analysis of electricity consumption in smart homes using time hierarchy  
2018 FUMBOT: Design, Implementation and Detectoin

## Honors

- 2019 Winner of the best paper award in the TopHPC (High Performance Computing and Big Data Analytics) congress  
2017 Ranked 2<sup>nd</sup> among B.Sc. Computer Engineering students graduated in the year 2017 and got accepted for M.Sc. at Ferdowsi University without entrance qualification exam

## Master Thesis

Title *Data-stream-based anomaly detection for smart meters in power grid*  
Supervisor Dr. Mohammad Hossein Yaghmaee Moghaddam

Advisor Dr. Mohsen Asadi

Description One aspect of using IoT in smart homes is measuring the power consumption of the devices (using smart meters) and recognizing their usage patterns. Smart meters data could help decision-makers for power consumption management, and due to the large volume of data, big data and data mining methods should be used for their analysis. Decision making and anomaly detection based on received data Increase the need for online processing. The purpose of this project is implementing a system for the online processing of smart meters data and anomaly detection based on them.

## Teaching Experiences

- 2015–2019 **The Theory of Formal Languages and Automata**, *Teacher Assistant and Project Supervisor*, Department of Computer Engineering.  
Dr. Abdorreza Savadi
- Spring 2017 **Artificial Intelligence**, *Teacher Assistant and Project Supervisor*, Department of Computer Engineering.  
Dr. Ahad Harati
- Fall 2016 **Fundamentals of Compiler Design**, *Teacher Assistant and Project Supervisor*, Department of Computer Engineering.  
Dr. Haleh Amintoosi
- Fall 2015 **Digital System Design**, *Project Supervisor*, Department of Computer Engineering.  
Dr. Mariam Zomorodi Moghadam
- Fall 2014 **Discrete Mathematics**, *Teacher Assistant*, Department of Computer Engineering.  
Dr. Mostafa Nouri Baygi

## Related Courses

Data Mining: 19.5/20  
Artificial Intelligence: 19.1/20  
Wireless Networking Basics: 19/20  
Distributed Systems: 18.3/20  
Advanced Computer Networks: 18/20  
Computer Networks: 17.9/20  
Secure Computer Systems: 20/20

## Selected Academic Projects

- 2017–2019 **Design and implementation of power usage smart metering system and consumption management methods based on received data**, As a M.Sc. Project infrastructure, Dr. Mohammad Hossein Yaghmaee Moghaddam and IoT team of IPPBX Lab, written with Java, C, php
- 2019 **Implementation of finding relations between electricity consumption of various devices and patterns of their usage**, Course: Data Mining , Dr. Behshid Behkamal, Dr. Haleh Amintoosi and Eng. Hadise Moradi, written with Matlab
- 2019 **Performing feature selection using analysis the pattern of household energy consumption using RECS2015 dataset**, Course: Data Mining , Dr. Behshid Behkamal, Dr. Haleh Amintoosi and Eng. Hadise Moradi, written with R
- 2017 **Design and implementation of laboratory botnet (FUMBOT) which a centralized botnet, able to perform DDoS attack and utilize the bots for extracting cryptocurrency**, B.Sc. Project, Dr. Haleh Amintoosi, written with Java

- 2016 **Implementation of uninformed search algorithms (BDS, UCS, IDS, DFD, BFS) on Pac-Man game**, Course: Artificial Intelligence, Dr. Ahad Harati, written with Java
- 2016 **Developing an Android program that searches between various news sites and sends related news based on your interest**, Course: Android Programming, Dr. Samad Paydar, written with Java
- 2015-2018 **Implementing several language recognition programs based on ANTLR**, Course: The Theory of Formal Languages and Automata, Dr. Abdorreza Savadi, written with Antlr

## Programming

Java	Professional	2013 - Present
Matlab	Intermediate	2017 - Present
Android	Intermediate	2015 - Present
Antlr	Intermediate	2014 - Present
Python	Basic	2018 - Present
C++	Basic	2014

Familiar with:

Go, VHDL, Linux Shell Programming, Markup Languages, ARM ST Microcontrollers

## Computer skills

LATEX, Git, Linux OS commandline (based on LPIC1), Microsoft Office, IntelliJ IDEA, PyCharm, Android Studio, ANTLRWorks,

## Memberships

- 2019 IPPBX Lab, Department of Computer Engineering, Ferdowsi University of Mashhad.
- 2016 - 2019 CCL Lab, Department of Computer Engineering, Ferdowsi University of Mashhad.

## Hobbies and Interests

Books, Movies and Music

Travelling

Astronomy

## References

**Dr. Mohammad Hossein Yaghmaee Moghaddam**

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**Dr. Haleh Amintoosi**

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**Dr. Behshid Behkamal**

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**Dr. Mohsen Asadi**

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