Soroush Omidvar Tehrani

Personal Data

Birth Place Mashhad, Khorasan Razavi Province, Iran

Birth Date 10 April 1995

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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**, *Department of Computer Engineering*, Ferdowsi University of Mashhad, Iran.

- Total GPA: 16.56/20 (3.29/4) ➔ Ranked 2nd
- 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**,Hadise Moradi, *Soroush Omidvar Tehrani*, Behshid Behkamal, Haleh Amintoosi, High Performance Computing and Big Data Analytics Congress, held in Tehran, Iran

2019 **Analysis of electricity consumption in smart homes using time hierarchy** (in Persian), *Soroush Omidvar Tehrani*, Hadise Moradi, Behshid Behkamal, Haleh Amintoosi, 3rd International Conference on Internet of Things and Applications, held in Isfahan, Iran

2018 **FUMBOT: Design, Implementation and Detection**, *Soroush Omidvar Tehrani*, Haleh Amintoosi, 9th OIC-CERT Annual Conference & 4th Conference on Cyberspace Security Incidents and Vulnerabilities, held in Shiraz, Iran

Honors

2019 Winner of the best paper award in the High Performance Computing and Big Data Analytics (TopHPC) congress

2017 Ranked 2nd 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 (on going)

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 Thesis 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.
Supervised by: Dr. Abdorreza Savadi

Spring 2017 **Artificial Intelligence**, *Teacher Assistant and Project Supervisor*, Department of Computer Engineering.
Supervised by: Dr. Ahad Harati

Fall 2016 **Fundamentals of Compiler Design**, *Teacher Assistant and Project Supervisor*, Department of Computer Engineering.
Supervised by: Dr. Haleh Amintoosi

Fall 2015 **Digital System Design**, *Project Supervisor*, Department of Computer Engineering.
Supervised by: Dr. Mariam Zomorodi Moghadam

Fall 2014 **Discrete Mathematics**, *Teacher Assistant*, Department of Computer Engineering.
Supervised by: 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	Intermediate	*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

Emails: amintoosi@um.ac.ir | h.amintoosi@gmail.com

Dr. Behshid Behkamal

Email: behkamal@um.ac.ir

Dr. Mohsen Asadi

Emails: mohsen.asadi@um.ac.ir | mohsen.asadi62@gmail.com