



## Profile

I hold a Master's degree in Software Engineering from the Amirkabir University of Technology, a top university in Iran. With over five years of work experience in major Iranian and American companies, I have developed a robust software and security background. My research and professional experience have equipped me with proficiency in research methodologies and tools in the software field. I am particularly interested in cybersecurity, especially in specialized areas such as binary analysis, reverse engineering, and software testing. I am also keenly interested in artificial intelligence, machine learning, and deep learning. I am seeking a PhD position that aligns with my expertise and interests in these areas. I am proficient in English, including reading, writing, and speaking.

## Education

### Master of Science in Software Engineering

Sep 2018 – Feb 2022

Amirkabir University of Technology, Iran

- Ranked [403](#) in QS World University Rankings, 2025

GPA: 16.68/20.00

**Thesis:** Directed Fuzzing Based on Vulnerability Specification (**Grade:** Excellent)

**Supervisor:** Dr. Mehran S. Fallah

### Bachelor of Science in Software Engineering

Sep 2014 – Sep 2018

Qom University of Technology, Iran

GPA: 14.94/20.00 (GPA of the last two years: 15.47/20.00)

**Thesis:** Design and Implementation of an OpenStack Cloud Infrastructure  
(**Grade:** 18.50/20.00)

**Supervisor:** Dr. Abdolreza Rasouli Kenari

## Research Interests

- Software Security
- Software Testing
- Network Security
- Machine Learning
- Deep Learning
- IoT and Embedded Systems
- Binary Analysis
- Malware Detection
- Reverse Engineering
- Data Science

## Language Competence and Test Scores

- English (Good): TOEFL will be taken by the end of Sep. 2024
- Persian (Native)

## Publications

### Conferences

- Kabiri, A.** Chapnevis, " BotNet Intrusion Detection System in Internet of Things with Developed Deep Learning," The 22nd International Conference on Information Technology, Computer and Telecommunication (ITCTCONF), 2022

### Ready for Submission

- Deep-Markove Learning Model for Consensus Scaled Optimization in MultiAgent Systems for DDoS Attack Detection

## Technical Skills

Programming: 

- C, C++, Python
- Low-level Programming, User-Mode Programming, System Programming, Multithreading, Object-oriented, Design patterns utilization, Functional Programming

CyberSecurity Tools:	<ul style="list-style-type: none"> <li>○ Fuzzers, Network Monitoring Tools, Security Auditing Tools</li> <li>○ Disassemblers (IDA Pro)</li> </ul>	<div><div></div></div>
Software Engineering Tools:	<ul style="list-style-type: none"> <li>○ UML and Software Design Visualizers (Microsoft Visio, Visual Paradigm)</li> </ul>	<div><div></div></div>

## Professional and Academic Experience

### ▪ IT Team Lead

May 2024 - Present

- Cpaas Project Management
- IT team leadership
- Support team leadership
- VoIP/SMS

### BAWAY LLC, USA

### ▪ Software Engineer

Oct 2022 – Apr 2024

- Research, Design, and Development of VoIP Softswitch
- Requirement extraction of a VoIP business
- C/C++ Programming
- Kamailio SIP Server
- API Interaction with Message Brokers, Databases, etc.

### XICOMM LLC, USA

### ▪ Software Engineer

Apr 2022 – Apr 2024

- Researching on various paradigms of software design and analysis
- Examining operating systems architecture and design paradigm
- Designing the large-scale architecture of an Antimalware software
- Engineering the fine-grained architecture of software modules
- Composing a unified model of software design visualization
- Coaching apprentices to improve their software engineering knowledge and programming skills
- Researched various techniques (Signature-based, Rule-based, Behavior-based, and Heuristic-based)
- Examined techniques and tactics of trending malware
- Researched APT (Advanced Persistent Threats) and their potential mitigation

### BitBaan Lab, Iran

### ▪ Software Engineer

Jan 2022 – Aug 2022

- Researched new technologies for connected cars and security challenges of connected cars
- Designed and developed low-level applications for IoT and embedded systems
- Developed communication applications

### BehSoft Corporation, Iran

### ▪ Researcher

Sep 2018 – Feb 2022

- Researched new techniques and methods of vulnerability detection
- Research on applications of artificial intelligence in vulnerability detection
- Coached newcomers to the lab to determine their field of study
- Authored a general guideline for entering the software testing field
- Studied advanced techniques of software testing
- Researched on security aspects of software testing
- Researched various types of threats and attacks
- Developed Fuzzers for vulnerability detection

### Formal Security Lab at Amirkabir University of Technology, Iran

### ▪ Instructor

2019 - 2021

- Web Penetration Testing videos and articles
- Network Penetration Testing videos and articles
- Computer Network videos and articles

- Hacking tools and techniques videos and articles

#### Online Academies

##### ▪ Software Engineer

Jan 2020 - Sep 2020

- Implemented network devices
- Configured virtualization infrastructures
- Developed network and security tools

#### Telecommunication Company of Iran - TCI

##### ▪ QoS & NOC Engineer

Jan 2019 - Mar 2020

- Monitoring and configuration of VoIP infrastructure
- Debugging VoIP call transmission

#### XICOMM LLC

##### ▪ Teaching Assistant

Sep 2018 - Sep 2022

- Program Analysis (Graduate)
- Formal Methods for Information Security (Graduate)

#### ▪ Amirkabir University of Technology, Iran

##### ▪ Teaching Assistant

Sep 2015 - Sep 2018

- Operating Systems (Undergraduate)
- Computer Networks (Undergraduate)

#### Qom University of Technology, Iran

##### ▪ Intern

Jun 2016 - Sep 2016

- Fully practical internship in the field of computer networks
- Under the supervision of highly skilled network specialists
- Design and implementation of computer network plans

#### Telecommunication Infrastructure Company

### Related Courses and Academic Projects

Advanced Programming Languages	16.50/20.00	Advanced Databases	19.00/20.00
Introduction to Design Patterns	17.75/20.00	Analysis & Design of Algorithms	17.50/20.00
Program Analysis	17.00/20.00	Database Design Fundamentals	17.50/20.00
Software Engineering Topics II	20.00/20.00	Software Engineering Topics I	17.50/20.00
Assembly, Machine Code, and System Programming	17.90/20.00		

#### Selected Projects:

- Ghoghnus Antimalware
  - Multi-purpose Antimalware for fast and accurate malware detection in desktop systems
  - Technologies: C/C++ and System/Windows Programming
- A three-stage algorithm on community detection in social networks
  - Academic project for Algorithms for Complex Networks course
  - Used Python
- IKCO Connected Cars
  - Smart system for connected vehicles using enhanced TCU modules
  - Technologies: C/C++, Linux, Message Brokers, Databases
- Calculate family centrality by all-subgraph counting.
  - Academic project for Algorithms for Complex Networks course
  - Used Python
- EthaSwitch
  - VoIP Softswitch with high CPS and high scalability
  - Technologies: C/C++, Linux, Kamailio SIP Server, Message Brokers
  - No-SQL and SQL databases

### Certifications

- Source Code Fuzzing, Rav Academy, 2021
- Security and Intrusion Protection Methods, Ashi Academy

### Online Courses

- Malware Analysis and Detection, Pentester Academy, 2023

- Windows System Programming, Graph Academy, 2022
- CCNA, Gotoclass, 2021
- CEH, Gotoclass, 2021
- LPIC1, Gotoclass, 2020
- Network+, Gotoclass, 2020

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## Honors and Awards

- Ranked 29<sup>th</sup> in Iranian universities' nationwide entrance exam for PhD studies, 2021
  - Ranked 14<sup>th</sup> in Iranian universities' nationwide entrance exam for master studies, 2018
  - Ranked among 0.4% in Iranian universities' nationwide entrance exam for bachelor studies, 2014
  - Ranked 4<sup>th</sup> in Kharazmi Festival, 2012
  - 10<sup>th</sup> Festival of Innovation and Prosperity Award, 2009
  - First Festival of Iranian Inventors and Innovators Award, 2009
  - Two licensed patents in the field of IoT, 2009
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## References

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|------------------------|--|----------------------|
| ▪ Dr. Mehran S. Fallah | Associate Professor<br>Department of Computer<br>Engineering-Software<br>Amirkabir University of Technology      | msfallah@aut.ac.ir   |
| ▪ Dr. Alireza Bagheri  | Associate Professor<br>Department of Software Education<br>Amirkabir University of Technology                    | ar_bagheri@aut.ac.ir |
| ▪ Dr. Hamed Farbeh     | Assistant Professor<br>Department of Architecture and<br>Computer Networks<br>Amirkabir University of Technology | farbeh@aut.ac.ir     |