# RASOUL REZVANLIALAL

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#### **EDUCATION**

MSc Iran University of Science and Technology, Computer Engineering,

Sep 2021 – Sep 2024

Software Engineering, Tehran, Iran

Grade: 18.11 / 20

Master's Thesis, Iran University of Science and Technology, Tehran, Iran April 2023 – Sep 2024

Supervisor: Dr. Saeed Parsa

Title: "Predicting the importance and type of damage in non-executable malicious complex files"

**BS** Bu-Ali Sina University, Computer Engineering, Software Engineering Sep 2014 – July 2019

Hamedan, Iran Grade: 13.40 / 20

## RESEARCH EXPERIENCE

## Under review

**Paper** June 2023 – April 2024

Rezvani-Jalal, Rasoul and Zakeri-Nasrabadi, Morteza and parsa, saeed and Hasan-Zarei, Amin, Enhancing Malware Detection Reliability in Non-Executable Files Using Confidence Score Prediction. Journal of Information security and applications. Available at SSRN: https://ssrn.com/abstract=4823193.

## Under preparation

Paper Dec 2024 – Present

Rezvani-Jalal, Rasoul and Zakeri-Nasrabadi, Morteza and Parsa, Saeed, Detecting the behavior of non-executable complex malwares using clustering technique.

#### Article

Rezvani-Jalal, Rasoul, Understanding the Architecture of an Antivirus System. Medium. Available at <a href="https://medium.com/@rasoulrezvanijal/understanding-the-architecture-of-an-antivirus-system-7dd0cc6060e1">https://medium.com/@rasoulrezvanijal/understanding-the-architecture-of-an-antivirus-system-7dd0cc6060e1</a>

#### TEACHING EXPERIENCE

Teaching Assistant Oct 2022 - Jan 2023

Computer Engineering Department, Iran University of Science and Technology, Tehran, Iran

Professor: Dr. Saeed Parsa

Compiler Design

Teaching Assistant Oct 2023 – February 2024

Computer Engineering Department, Iran University of Science and Technology, Tehran, Iran

Professor: Dr. Hossein Rahmani

• Data Mining

## **Teaching Assistant**

*April* 2024 – *July* 2024

Computer Engineering Department, Iran University of Science and Technology, Tehran, Iran

Professor: Dr. Ahmad Akbari-Azirani

• Advanced network security

## **PROFESSIONAL AFFILIATIONS**

#### Full-time

Graph Company, Tehran, Iran

December 2023 – Now

# Threat Analyst, EDR Project

- Analyze malicious files
- Create signature for malwares with YARA
- Implement famous process injection attacks like thread execution hijacking as test cases
- Cyber threat intelligence
- System calls monitoring in Linux OS with eBPF
- Signature validation
- Develop Intelligent malware detection mechanism

#### Full-time

# Amnpardaz Software Co, Tehran, Iran

April 2019 - Mar 2020

# Malware Analyst, Padvish Project

- Analyze malicious file
- Create signature based for them
- Develop cleaner for each type of malwares
- Configure Virtual-Box in order to detect malicious behaviors

#### Full-time

Amel System, Hamedan, Iran

April 2018 - Mar 2019

## **Noc Specialist**

- Data Center Maintenance
- Network Monitoring
- Attending in BMS Course

#### Internship

Tolu Ideh Amn, Hamedan, Iran

Jun 2018 - Feb 2019

# Cybersecurity

- Learning about malwares
- Learning about Data Center

## **PROJECTS**

- Implementing a Python program using ANTLR to extract Control Flow Graph (CFG) of C++ programs which is important for many aspects of cybersecurity such as program analysis and code obfuscation.
- Implementing a Java program for encrypted communication between two side using socketprogramming and also RAFT algorithm, all related to distributed systems.

- Implementing various Python programs to preprocess dataset, learn, postprocess and illustrate different diagrams for multiple contexts like Network Intrusion Detection, all related to data science.
- Implementing Python program using Selenium to crawl across different parts of a financial webpage in order to gather various data and report it as a csv file for further predictions.
- PfSense configuration and set all systems DNS on PfSense in order to monitor network traffic and also setting Suricata rules on PfSense machine to detect network intrusions.
- Implementing Python program to detect XSS vulnerability detection in a webpage.
- Implementing Python program using set-trace library to perform statistical fault localization which is a
  well-known technique in software testing.
- Conducting various cryptographic-related activities using relevant tools such as CrypTool and OpenSSL.
- Designing test sets for PID controllers using Python scripts and employing reinforcement technique to
  evaluate the performance of the controllers.
- Working with ROS v2 in CARLA simulator project. In included gathering information between client and server, and analyze it in ROS framework.

## **RESEARCH INTERESTS**

- Malware Detection
- Malware Analysis
- Computer Security
- Machine Learning
- Cybersecurity for AI
- AI for Cybersecurity
- Program Analysis
- System Programming
- Software Testing
- Fuzzing
- Cyber Threat Intelligence
- Detecting Adversarial Attacks
- Trojan Neural Network

## HONORS AND AWARDS

Ranked 4<sup>th</sup> among 25 master's students
 Participation in the Elite Foundation plan
 Ranked 3<sup>rd</sup> in Mobile application competition marathon held in Bu-Ali Sina University
 Ranked 2<sup>nd</sup> in Handball competitions for students of the west of the country
 Ranked 4<sup>th</sup> in National table tennis tournaments
 June 2023
 Sep 2023
 Sep 2017
 Dec 2016
 July 2009

## **LANGUAGES**

English: IELTS overall band score 7 (C1). Listening: 8, Speaking: 7, Writing: 6.5, Reading: 6.5.

Persian: Native Language

# **COMPUTER SKILLS**

Programming Languages	Malware Analysis Tools	UI/UX Design Technologies
VBA C++ Python Powershell Bash scripting	OllyDbg IDA Pro Process Monitor Process Explorer API Monitor Cuckoo Sandbox VMWare Workstation WireShark eBPF Yara	HTML JavaScript
General Technologies	Python Libraries	Other Tools
PID Controller Reinforcement learning Fixed-size-candidate-set ART Metamorphic Testing	TensorFlow Scikit-learn Keras Pandas Numpy Matplotlib Selenium Yara-python Virustotal-python	Pycharm GitHub Jupyter Notebook Linux Visual Studio ANTLR

# **HOBBIES**

- Going to the gym
- Listening to Music
- Playing Ping-Pong
- Playing Handball

# REFERENCES

# Dr. Saeed Parsa (Associate professor)

Faculty member

Computer Engineering Department

Iran University of Science and Technology

Tehran, Iran

Email: parsa@iust.ac.ir

# Dr. Morteza Zakeri (Assistant professor)

Faculty member

Computer Engineering Department Amirkabir University of Technology

Tehran, Iran

Email: zakeri@aut.ac.ir

**Dr. Ahmad Akbari-Azirani (Associate professor)**Faculty member
Computer Engineering Department
Iran University of Science and Technology Tehran, Iran

Email: akbari@iust.ac.ir