Fabrizio Cara

Contacts

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Summary

A fast-learning and technology enthusiastic person, I completed my academic studies in Computer Engineering with honors. In the past years, I have worked on different Cybersecurity research projects, which allowed me to keep a horizontal approach and knowledge in the security field. Even if I can work independently, I enjoy organizing and exchanging ideas with the team to reach the project's most significant outcomes. For the future, I am looking for new opportunities in a dynamic working environment to improve my knowledge and give my contribution in the fields of Cybersecurity and Software Engineering.

Experiences

- **Research Assistant – Ph.D.** (10/2018 – now)
  Course: Computer Engineering
  Research Field: Computer Security & Software Engineering
  Location: University of Cagliari, Cagliari, Italy
  Laboratory: PRALab (pralab.diee.unica.it)
  Other Activities: Operating Systems Tutor, CyberChallenge.IT Web Security tutor
  Supervisor: Prof. Giorgio Giacinto

- **Research Assistant – Internship** (12/2019 – 06/2020)
  Research Field: Internet of Things Network Security
  Location: Georgia Institute of Technology, Atlanta, Georgia, Stati Uniti
  Laboratory: Astrolavos Lab (astrolavos.gatech.edu)
  Supervisor: Prof. Manos Antonakakis

- **Research Scholarship Holder** (01/2018 – 07/2018)
  Title: Study and development of intrusion detection techniques on X86 and Mobile platforms through the analysis of logs and codes.
  Research Field: Reverse Engineering & Malware Analysis
  Location: University of Cagliari, Cagliari, Italy
  Laboratory: PRALab (pralab.diee.unica.it)

Education

- **Master's degree in Telecommunications Engineering (Internet Engineering)** (2016 – 2018)
  Location: University of Cagliari, Cagliari, Italy
  Relevant Coursework: Operating Systems, Computer Security, Machine Learning, Smart Housing, Internet of Things, Computer Architectures, Embedded Systems, Information Theory and Coding, Innovative Architectures and Applications in the Internet, Mobile Networks
  Final Grade: 110/110 magna cum laude

- **Bachelor's degree in Electrical and Electronics Engineering (Computer Engineering curriculum)** (2013 – 2016)
  Location: University of Cagliari, Cagliari, Italy
  Relevant Coursework: Computer Architectures, Communication Networks, Signal Theory, Databases, Digital System Design, Software Engineering, Internet, Web Development, Object-Oriented Programming Languages
  Final Grade: 105/110

Publications

- **On the Feasibility of Adversarial Sample Creation Using the Android System API** (09/2020)
  Description: a study on Android adversarial malware and presentation of a system to generate these samples capable of evading the classification of machine learning-based system
  Journal: Multidisciplinary Digital Publishing Institute (MDPI)

- **PowerDrive: Accurate De-obfuscation and Analysis of PowerShell Malware** (06/2019)
  Description: a study of PowerShell attacks and presentation of PowerDrive, an open-source, static and dynamic de-obfuscator for this type of attacks
  Conference: International Conference on Detection of Intrusions and Malware, and Vulnerability Assessment (DIMVA)

Skills

- Programming Languages:
  - **Python**
  - **Java**
  - **C**
- **Windows**, **Linux,** and **Android** Operating Systems
- **Machine Learning** classification
- **Network Traffic Analysis** and **Malware Analysis**
- **Remote Machine Management** (Linux)
- Familiarity with Web Development using **Flask**, **HTML**, **CSS**, and **Javascript**

Languages

- **Italian**: native speaker
- **English**: advanced level