

# Cristian Souza

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## Summary

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Currently working as a cyber security consultant in Brazil. Experienced in information security, system administration, computer vision, and image processing. Works on research projects since high school. Likes trying new tools and technologies, as well as developing new open-source projects to help the community.

## Experience

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### Daryus Consultoria e Treinamento

*Remote*

CYBER SECURITY CONSULTANT & INSTRUCTOR

*Jan 2021 -*

- Penetration testing in web applications, infrastructures and mobile applications.
- Reverse engineering (PE and APK).
- Computer forensics, cloud computing audits, secure development, red team exercises, phishing campaigns, critical systems audit.
  
- Instructor of web application security, secure programming and ethical hacking courses.
- Main contents: OWASP Top 10, OWASP Secure Coding Practices, OWASP Proactive Controls, OWASP API Security, SAST, DAST, SCA, DevOps, DevSecOps, and threat modeling.
- Other courses ministered: Penetration Testing, Open-source Intelligence (OSINT), Ethical Hacking Foundation, Secure Programming Foundation, NIST Cyber Security Framework.

### Federal Institute of Rio Grande do Norte

*Natal, RN - Brazil*

RESEARCHER, R&D SOFTWARE DEVELOPER & TUTOR

*Apr. 2016 - Jun. 2022*

- Main programming languages: Java and Python.
- Worked in the fields of information security, computer vision and image processing.
- Subtopics of interest: malware analysis and detection, SDN, and MTD.
- Published research papers in multiple conferences and journals.
- Worked as operating systems tutor (2021 - 2022).
- Worked as algorithms tutor (2017).
- Developed a phishing detection tool using deep learning.
- Developed an ALPR application for embedded hardware (with patent application).
- Developed an OCR application.
- Developed a deep learning face recognition application and API.
- Other technologies: OpenCV, dlib, REST, Flask, MySQL, RFID.

### SutHub

*Remote*

BACK-END DEVELOPER

*Nov. 2020 - Apr. 2021*

- Main programming language: Python.
- Developed multiple Robotic Process Automation (RPA) tools.
- Performed Static Application Security Testing (SAST) in the core system.
- Other technologies: Selenium, AWS (EC2, CloudWatch, and S3), MySQL, SonarQube.

### Actions Security

*Remote*

INFORMATION SECURITY ANALYST

*May 2018 - Jul. 2019*

- Main programming languages: Python and C.
- Contributed to the development of a Web Application Firewall (WAF).
- Worked with the Elastic Stack, Docker containers and reverse proxies.
- Implanted an OpenStack infrastructure.
- Executed penetration tests in web applications.
- Other technologies: OWASP Top 10, AWS, OpenStack, ModSecurity, Linux.

## Education

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### UNICIV (Centro de Inovação VincIT)

*Remote*

POSTGRADUATE DEGREE IN ETHICAL HACKING AND CYBER SECURITY

*2022 - Present*

### IFRN (Federal Institute of Rio Grande do Norte)

*Natal, RN - Brazil*

BACHELOR OF TECHNOLOGY (BTECH) IN COMPUTER SYSTEMS NETWORKING

*2019 - 2022*

## IMD (Digital Metropolis Institute)

CERTIFICATE PROGRAM IN ELECTRONICS

Natal, RN - Brazil

2018 - 2019

## IFRN (Federal Institute of Rio Grande do Norte)

CERTIFICATE PROGRAM IN INFORMATICS

Natal, RN - Brazil

2015 - 2018

## Skills

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|--------------------|--|
| <b>Languages</b>   | Portuguese (native), English (advanced level), French (basic level)  |
| <b>Programming</b> | C, Java, Python, Shell Script, SQL   |
| <b>Generic</b>     | Penetration Testing, OWASP Top 10, Linux Administration, Reverse Engineering, AWS, Git, Docker, Elastic Stack, Flask, REST |

## Certifications

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### Certified Ethical Hacker (CEH)

EC-COUNCIL

[ECC8169403257](#)

### Ethical Hacking Foundation

EXIN

[6382379.20813916](#)

### Secure Programming Foundation

EXIN

[6382379.20811383](#)

### Linux+

COMPTIA

[9BSTQ4TM5LEE1GKT](#)

### LPIC-1

LINUX PROFESSIONAL INSTITUTE

[LPI000393801](#)

## Research Papers

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### Abordagem Adaptativa para Proteção de Redes SDN Utilizando Moving Target Defense

XL SIMPÓSIO BRASILEIRO DE REDES DE COMPUTADORES E SISTEMAS DISTRIBUÍDOS

[SBRC 2022](#)

2022

### Freki: Uma Ferramenta para Análise Automatizada de Malware

XXI SIMPÓSIO BRASILEIRO DE SEGURANÇA DA INFORMAÇÃO E DE SISTEMAS COMPUTACIONAIS

[SBSeg 2021](#)

2021

### On detecting and mitigating phishing attacks through featureless machine learning techniques

WILEY INTERNET TECHNOLOGY LETTERS

[DOI: 10.1002/itl2.135](#)

2020

### MTD para Proteção de Redes SDN

CONFERÊNCIA NACIONAL EM COMUNICAÇÕES, REDES E SEGURANÇA DA INFORMAÇÃO

[ENCOM 2020](#)

2020

### PhishKiller: Uma Ferramenta para Detecção e Mitigação de Ataques de Phishing Através de Técnicas de Deep Learning

XIX SIMPÓSIO BRASILEIRO DE SEGURANÇA DA INFORMAÇÃO E DE SISTEMAS COMPUTACIONAIS

[SBSeg 2019](#)

2019

### Embedded System for Access Control Based on Facial Biometry and RFID

PROCEEDINGS OF THE FUTURE TECHNOLOGIES CONFERENCE

[DOI: 10.1007/978-3-030-02683-7\\_62](#)

2018

## Honors & Awards

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### Academic Honors Diploma

IFRN

2022

### Distinguished Paper Award, XL SBRC

BRAZILIAN COMPUTER SOCIETY

2022

### CVE-2019-7634

COMMON VULNERABILITIES AND EXPOSURES

2019

### Capture the Wave Champion

DARKWAVES CONFERENCE

2018

## Open-source Projects

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### Freki

MALWARE ANALYSIS PLATFORM

- Features: static analysis, user management, REST API, and Web UI.

Python

### OpenBSD self-hosted

DEPLOY PRIVATE SERVICES ON TOP OF OPENBSD

- Features: automatically installs and configures cloud, git, and email services.

Shell Script

### JCEditor

ADVANCED TEXT EDITOR

- Features: syntax-highlighting, cross-platform, Swing UI.

Java

## Patents & Software

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### Sistema Embarcado para Reconhecimento Automático de Placas de Veículos

BR 10 2018 015493 1

2018

### NAVI RPi Face Recognition

BR512019000143-5

2019

### NAVI-ALPR

BR512019000144-3

2019

### NAVI Face Recognition API

BR512019000141-9

2019

### Sistema Embarcado para Medição de Pluviosidade e Gerenciamento SNMP

BR512019000140-0

2019

### OCR-NAVI

BR512018000086-0

2018