

Gokulkrishna P Menon

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Objective

As a highly motivated Master's student in Computer Science with a strong interest in cybersecurity, I am seeking a challenging role that will allow me to utilize my technical skills, passion for security, and extensive experience in CTF contests and open-source contributions. With a deep understanding of programming languages such as C, Python, and PHP, as well as expertise in security vulnerability categories and bug disclosure practices, I aim to contribute to securing computer systems against potential threats in the cybersecurity field.

Work Experience

- 2018 to present **Arizona State University**, *Security Researcher at SEFCOM*, Developed a new fuzzing technique that resulted in a significant increase in bug discovery on Linux Binaries.
- 2018 to present **Arizona State University**, *International Capture The Flag(CTF) player with Shell-phish*, Actively participates in Capture the Flag hacking contest with focus on security challenges in the area of Reverse Engineering and Web Security.
- 2015-2018 **Amrita University**, *International Capture The Flag(CTF) player with Team Bi0s*, Actively participated in Capture the Flag hacking contest with focus on security challenges in the area of Reverse Engineering and Web Security.

Teaching Experience

- 2023 **Teaching Assistant for CSE 365**, *Introduction to Information Assurance course, assisting Dr. Fish Wang in lectures, grading, and mentoring over 100 students, while improving course content with fellow TAs.*
- 2019 **Teaching Assistant for CSE 365**, *Conducted sessions, graded assignments, and provided mentoring and support to students for Introduction to Information Assurance course.*
- 2019 **Teaching Assistant for CSE 598**, *Took sessions and graded assignments as a teaching assistant for Dr. Tiffany Bao in CSE 598 - Computer Security: Techniques and Tactics course.*

Education

- 2019-2023 **Masters in Computer Science**, *Arizona State University, Tempe, Arizona.*
(Expected)
- 2014-2018 **Bachelors in Computer Science and Engineering**, *Amrita University, Kollam, Kerala.*

Publications

- 2022 **Arbiter: Bridging the Static and Dynamic Divide in Vulnerability Discovery on Binary Programs**, Jayakrishna Vadayath, Kyle Zeng, Nicolaas Weideman, **Gokulkrishna P Menon**, Yanick Fratantonio, Davide Balzarotti, Adam Doupé, Tiffany Bao, Ruoyu Wang, Christophe Hauser, and Yan Shoshitaishvili, in Proceedings of the USENIX Security Symposium.

Achievements

- 2020 **CVE 2019-14769, 14770, 14771**, Discovered two Cross Site Scripting and one Remote code execution bug in Backdrop Content Management System.
- 2019 **NullCON CTF**, As part of Shellphish, secured first position.
- 2018 **BlackHat Asia**, Awarded scholarship to attend BlackHat Asia 2018.
- 2016 **CSAW Capture The Flag Finals**, As part of team bi0s, secured first runners up position.

Workshops

- 2017 **Web Application Security workshop**, As part of Team bi0s, conducted a two-day workshop in Sree Narayana College of Engineering, Kochi, India.
- 2017 **InCTF**, Organized and authored challenges for the International Capture the Flag contest in 2015 and 2017 as part of Team bi0s..
- 2016 **InCTF Junior**, Organized InCTF Junior, a Capture the Flag style contest aimed at cultivating cyber security awareness and training in high school students.
- 2016 **PSG College Of Technology**, Workshop on Web Application Security for Professionals as part of annual PSG Tech Cyber Security awareness week, Coimbatore, India.

Project

- 2019 to present **FlakJack**, Actively working on a framework to improve fuzzing by dynamically patching the Linux binaries to find deeper bugs, The objective is to develop a framework that dynamically patches crashes discovered during fuzzing to enable the discovery of deeper bugs in Linux binaries.
- 2021 to present **Open-Source Contribution**, Contributes and maintains open-source binary analysis framework Patcherex and improved Phuzzer, a python wrapper for interacting with fuzzers such as AFL.
- 2018 **Privacy badger extension**, Developed an extension for Google Chrome to tackle browser fingerprinting and offers protection against Canvas Fingerprinting and Spectre attack, <https://github.com/Web-privacy/Privacy-Extension>.

Technical skills

Languages C, C++, Python, PHP,
JavaScript, MySQL