ARJUN G U

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VULNERABILITY RESEARCHER

Motivated Computer Science and Engineering student and skilled information security analyst and researcher with experience in Vulnerability Assessment, Penetration Testing, Source Code Review, Reverse Engineering, and Cyber Training Development. I aspire to be a skilled Vulnerability Researcher with interests in reverse engineering and binary exploitation on embedded hardware devices, low-level applications and software.

EDUCATION

ENGINEERING

Bachelor of Engineering, Computer Science

Bangalore Institute of Technology | 2023 - 2025 (Expected)

DIPLOMA

Diploma in Computer Science & Engg

Sri Jayachamrajendra (Govt.) Polytechnic | 2019 - 2022

PROFESSIONAL EXPERIENCE

NDAY VULNERABILITY RESEARCH

Exodus Intelligence | Aug 17 2023 - Sep 17 2023

- Compiled metadata reports for CVEs sourced from the CISA KEV (Known Exploited Vulnerabilities) list.
- Conducted in-depth analysis on multiple CVEs, producing comprehensive root cause analysis reports. Included reliable proof-of-concept or exploit details along with corresponding mitigation guidance to facilitate effective defensive measures implementation.
- Completed 76 CISA KEV reports during the internship.

INSTRUCTIONAL DESIGNER

Hackdev Technology Pvt. Ltd. | Feb 17 2023 - Mar 17 2023

- Created and implemented CTF labs for system security as an instructional designer, enabling students to grasp the consequences of vulnerabilities in insecure code.

PROJECTS

ROOTKIT

Personal Project | 2023

- Rootkit is a personal project I developed as a custom Python module for binary analysis, exploitation, and automation.
- It serves as a powerful tool that I use to tackle pwn challenges in Capture The Flag (CTF) competitions.
- It has been trained using large collections of data models comprising exploits that have been used in past Capture the Flag (CTF) competitions.
- **Programming Languages:** Python
- **Live Demo:** Link to Live Demo

MY BLOG

Personal Project | 2023

- The Website serves as a platform for sharing research findings, vulnerability analysis, exploit development techniques, and writeups for Capture The Flag (CTF) challenges.
- **Technologies Used:** React, Next.js, MDX (Markdown with JSX), Tailwind CSS, Git (Version Control)
- **Code Repository:** Link to GitHub Repository

THE RED WHEELBARROW

Personal Project | 2023

- Developed and implemented an essential **Discord bot** catering specifically to CTF players, providing real-time chat support, logging, moderation of CTF events, music playback, and interactive games.
- **Programming Languages:** Python

LANBLAST

Personal Project | 2019

- The LAN System Controller is a centralized system designed to manage and operate an entire office network connected through a Local Area Network (LAN).
- It serves as a **central communication hub** to establish connections with clients and execute commands. The **C2 server** acts as a powerful tool for managing and controlling a network of distributed clients.
- **Programming Languages:** Bash, Powershell
- **Live Demo:** Link to Live Demo
- **Code Repository:** Link to GitHub Repository

GHOSTPHISH

Personal Project | 2019

- GhostPhish is a **modern phishing tool** designed for educational purposes only.
- It utilizes advanced techniques, including the **Selenium** module, to simulate phishing attacks and **two-factor authentication (2FA)** security measures.
- **Key Features** of this project include Extensive logging and reporting capabilities, 2FA security implementation, Validation of credentials provided by the victim using server side programming.
- **Programming Languages:** Python, HTML, PHP, CSS
- Live Demo: Link to Live Demo
- Code Repository: Link to GitHub Repository

ACHIVEMENTS

- Internationally secured **3rd** position as a finalist and representing my university at the prestigious **C2C CTF 2023** finals held at **Keio University, Tokyo, Japan**.
- Currently placed among the **#155** worldwide out of 31113 players and holding the **#2** position in India on **pwnable.tw.**
- Secured **3rd** place in **NullCon Goa 2023**.
- Secured an impressive **2nd position** in **Embedded Security CTF 2022** conducted at **IIT Madras India**, highlighting proficiency in the field of embedded security and cybersecurity.
- Secured an outstanding **4th position** in the prestigious **InCTF Nationals 2021**, ranking among the top contenders nationwide.
- Secured an outstanding **4th position** in the prestigious **InCTF Juniors 2020**, ranking among the top contenders nationwide.

EXTRACURRICULARS

- Participation in **22** (currently) international Capture The Flag events in 2023 and **100+** in 2022 and 2021.
- Challenge author for CTF event SekaiCTF during the year 2022.
- Hosted international CTF event zh3r0 CTF during the year 2021 and 2020.
- Served as the **Event Coordinator** for the state-level coding competition at TechBiz college fest in 2019, successfully organizing and managing the event.
- Won the best writeup prize for stuff challenge **LACTF 23.**
- Won the best writeup prize for minecraft challenge **Imaginary CTF 23**.

TECHNICAL SKILLS

- **Programming:** Python, C, bash, java, x86_64 ASM
- **Development Tools:** Git, GitHub, Docker, Sublime Text, VS Code
- **Exploit Development:** IDA, Ghidra, Binary Ninja, GDB, PwnDBG
- **Detection:** snort

RESEARCH INTEREST

- Embedded Device Exploitation
- Linux Kernel Exploitation
- Automation & Scripting

HOBBIES

- Capture The Flag (CTF) competitions with Project Sekai since 2023 and served as the team leader of zh3r0 since 2020.
- Travelling
- Vulnerability Research
- Content writer