Sam MG Harish

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Profile

Mobile Security Researcher specializing in Android reverse engineering, mobile malware analysis, and CTF development. Strong in secure coding, debugging, and building reliable, security-focused software.

Education

- **Amrita Vishwa Vidyapeetham** — *August 2023 – Present*
  B.Tech CSE (Specialization: Cyber Security) (CGPA: 7.32/10.0) — Kollam, Kerala
- **Vidya Mandir Estancia** — *May 2023*
  Senior High School (Percentage: 72.6%) — Guduvancherry, Chennai
- **Srimathi Sundaravalli Memorial School** — *May 2021*
  High School (Percentage: 80.2%) — Perungalathur, Chennai

Experience/Internships

- **Team bi0s** — *February 2024 – Present*
  Mobile Security Researcher — Kollam, Kerala
  - Reverse-engineered 40+ Android applications to identify security flaws and improve mobile app security.
  - Solved 100+ CTF challenges across reversing, mobile security, and exploitation.
  - Developed 10+ CTF challenges for mobile security, reversing, and exploitation.
- **NullClass** — *Mar 2025 – Sep 2025*
  Cybersecurity Internship
  - Engineered a proof-of-concept Android malware *HarvestShell* to simulate data exfiltration and reverse shell attacks.
  - Developed Frida instrumentation scripts to hook Java methods, bypass MD5 checks, and exploit SharedPreferences vulnerabilities.
  - Utilized ADB and Termux to deploy Python web servers and Bash automation scripts for Android system telemetry and management.

Patents and Publications

C=Conference, J=Journal, P=Patent

[C.1] Sam MG Harish, Aksharasree S, Deepak S G, Mamatha S, Vipina Valsan (2024). **Enhancing Traffic Safety: An Automated License Plate Recognition System for Effective Law Enforcement**. In *2024 International Conference on Advances in Computing Research on Science Engineering and Technology (ACROSET)*, pp. 1-6. IEEE. 27–28 September 2024, Indore, India. DOI: 10.1109/ACROSET62108.2024.10743360

Skills

- **Programming Languages:** Python, Java, C, JavaScript
- **Mobile Security Tools:** JADX, IDA, Frida, Burp Suite, HTTP Toolkit
- **Version Control:** Git, GitHub
- **Soft Skills:** Problem Solving, Debugging, Team Collaboration, Adaptability

Honors and Awards

- **Mobile Hacking Lab CTF - Black Hat MEA 2025 (1st Place)** — *Dec 2025*
  Cybersecurity CTF Competition
  - Secured 1st place in a 48-hour individual CTF featuring challenges across Android, iOS, and Fuzzing domains.
- **H7CTF 2025 (1st Place)** — *Nov 2025*
  Cybersecurity CTF Competition
  - Ranked 1st among 30 finalist teams (selected from 2,000+ global participants) at H7CTF 2025 Grand Finale.
- **CII Summit (Finalist Team)** — *Sep 2025*
  National Level Hackathon
  - Selected among the top 30 teams nationwide to present pplSafer at the CIIS Hackathon.
- **DEFCON 33 – Mobile CTF (3rd Place)** — *Aug 2025*
  Cybersecurity CTF Competition
  - Placed 3rd in the DEFCON 33 Mobile CTF.
- **Vidyut Multifest Hackathon (3rd Prize)** — *May 2025*
  AI-powered Security Analysis Tool
  - Built *Null-Scan*, an AI-powered security analysis tool for Web, Android, and Blockchain.
  - Led the Android module, implementing automated static analysis and AI-driven vulnerability classification.

Talks & Presentations

- **bi0s Kochi – Technical Talk** *Sep 2025*
  Mobile Malware and Reverse Engineering
  - Delivered a session on mobile malware and mobile reverse engineering, covering real-world threats, analysis workflows, and a live hands-on demonstration.

Projects

- **lu77U-MobileSec** *May 2025 – Present*
  Tools: Python, AI Models, Android Static Analysis
  - Developed a Python-based CLI tool that integrates AI models for static analysis of Android apps.
  - Automatically detects whether the app uses Java/Kotlin, Flutter, or React Native to apply framework-specific analysis.
  - Performs static analysis tailored to the detected framework and language & Identifies security vulnerabilities using AI-powered heuristics.
- **MobileReversing** *May 2024 – Present*
  Tools: Frida, Burp Suite, HTTPToolkit, Android RE
  - Walkthrough and roadmap for learning Android reverse engineering and mobile security.
  - Documented dynamic analysis techniques and challenge solutions.
  - Utilizes tools like Frida, Burp Suite, and HTTPToolkit for instrumentation.
- **Python SHA-256 Implementation** *Dec 2024 – Jan 2025*
  Tools: Python, Cryptography, CLI
  - Python implementation of the SHA-256 hashing algorithm from scratch.
  - Provides a command-line tool for hashing strings and files.
  - Demonstrates understanding of cryptographic primitives and CLI design.

Volunteer Experience

- **BSides Dehradun** *Sep 2025 – Present*
  CTF Core Team Member
  - Develop reversing and Android-focused challenges for an 8-hour CTF.
  - Contribute to event planning, coordination, and on-site operations.
- **Student Social Responsibility** *Nov 2025*
  Civic Education
  - Delivered sessions on the Constitution of India covering origin, evolution, and civic responsibilities.
- **BSides Vizag** *Oct 2025*
  Promotions & Outreach
  - Contributed to pre-event promotional efforts for BSides Vizag 2026.
- **BSides Kerala** *Feb 2025*
  Ground Operations
  - Assisted with event operations at BSides Kerala 2025.
  - Participated in workshops on Android app security and Azure pentesting.
- **bi0s Pentest Workshop** *Sep 2024*
  Coordinator and Speaker
  - Taught students how to use JADX, ADB, and Genymotion for APK testing and reverse engineering.
  - Conducted a CTF for live demonstration.
- **AmritaVaram Seminar** *Oct 2023*
  Cybersecurity Educator
  - Raised student awareness about modern cybersecurity threats and how to avoid them.

Languages & Interests

Languages: English (Fluent); Tamil (Native); Malayalam (Basic); Telugu (Basic)
Hobbies: Long-distance cycling (2000+ km); Android app development; Listening to Music