Shiva Shashank Kusuma

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Education

University of Alabama	*Huntsville, AL*
Master's in **Computer Science** – 3.5/4.0 CGPA	Expected: **May 2024**
SR Engineering College	*India*
Bachelor's in **Computer Science** – 3.15/4.0 CGPA	Aug 2016 – Nov 2020

Technical Skills

Languages: Python, HTML/CSS, JavaScript, SQL (MYSQL), Assembly Language (x86)
Technologies/Frameworks: React, Next.js, Node.js, Flutter, Tailwind CSS, Blockchain/Web3
Developer Tools: Git/GitHub, Bash, Windows, Linux, MacOS, VS Code, AWS, Firebase
Other Skills: Reverse Engineering, Malware Analysis, Software Exploitation, ROP (code-reuse attacks)

Experience

Graduate Assistant — Aug 2022 – Dec 2023
University of Alabama — *Huntsville, AL*

- **Co-authored** a research paper and submitted a novel exploit to Exploit-DB within a 12-month period
- Contributed to the creation of ROP Rocket with a professor and presented it as a **co-speaker** at Defcon 2023 [info: link]
- Mastered ASM, deepening understanding of core computer operations and enhancing optimization capabilities
- Identified and addressed software vulnerabilities using reverse engineering and malware analysis for robust code
- Acquired a strong foundation in computer security, enhancing problem-solving skills for complex software challenges

Mobile Application Developer Intern — May 2020
UrbanRider — *Hyderabad, India*

- Learned and developed cross-platform applications using Flutter Framework within a week
- Engineered UrbanRider manager app using Flutter/Dart for Front-end, Firebase for Back-end
- Maintained the codebase single-handedly while integrating the new features into the app in real-time

Projects

Geekyboy | Technologies: Java, Android Studio, WordPress, Firebase — Nov 2017 – April 2019

- Tech related Android app (**50k+** Downloads), Website (**100k+** Stats), **150** Rank in Google Play Store.
- Researched and Implemented ASO gaining huge traffic (2k+ downloads/day) with an average **4.7**/5-star.

Decentralized Chat DApp | Technologies: Blockchain/Web3, React.js, gun.js — April 2022

- Architected a decentralized chat app capable of handling thousands of messages per second, scaling globally at no cost.
- The data and infrastructure are not controlled by a centralized authority like AWS/Azure/GCP.

Achievements

- Co-speaker at **DEF CON** official talk - 2023
- Won 4th prize in 48-hour WittyFeed coding hackathon

Certifications

Responsive Web Design – JavaScript	FreeCodeCamp
Data Structures and Algorithms – Python	NPTEL

Publications

Co-authored 'Advanced ROP Framework' on exploit development techniques, presented at DEF CON 31, 2023. [Paper]