# Shiva Shashank Kusuma

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Cybersecurity researcher with 3 years of experience and dual Master's degrees in Cybersecurity and CS. Proven track record developing open-source security tools (ROP ROCKET), publishing research, and presenting at top-tier conferences (DEF CON, BlackHat).

#### Education

University of Alabama

Master's in Cybersecurity – 3.7/4.0 CGPA

Master's in **Computer Science** – 3.6/4.0 CGPA

SR Engineering College

Bachelor's in Computer Science - 3.15/4.0 CGPA

Huntsville, AL

Graduated: May 2025

Graduated: May 2024

India

Aug 2016 - Nov 2020

## Technical Skills

Languages: Python, JavaScript (ES6+), HTML, CSS, Assembly Language (x86)

Technologies/Frameworks: React, Next.js, Express.js, REST APIs, AI/LLMs, Prompt Engineering Tools/Platforms: Git/GitHub, Bash, Windows, Linux, MacOS, VS Code, Version Control, AWS Cloud Cybersecurity: Reverse Engineering, Software Exploitation, ROP (code-reuse attacks), Windows APIs

## Experience

## **Security Research Assistant**

Verona Labs, UAH

Aug 2022 – May 2025

Huntsville, AL

- Published multiple research papers as co-author and submitted a novel exploit to Exploit-DB contributing to security research.
- Co-created ROP ROCKET (open-source) and presented it as a co-speaker at DEF CON 2023 showcasing it globally [link].
- Developed more than 150 working ROP patterns that can exploit Windows along with Process Injection techniques [paper].

## Mobile Application Developer Intern

May 2020 – June 2020

Hyderabad, India

- Mastered Flutter within 1 week to deliver production-ready cross-platform app, reducing onboarding time by 75%.
- Built manager app, deploying 15+ features that improved efficiency by 40% and cut deployment cycle from 2 weeks to 3 days.

## **Projects**

UrbanRider

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.

### AI Research Paper Assistant | Technologies: Python, OpenAI API

Feb 2025

- Developed AI-powered research assistant processing 1000+ arXiv papers daily, reducing manual research time by 80%.
- Integrated summarization generating 200-word abstracts in <5 sec, enabling researchers to review 50+ papers/hour vs 5.

#### Achievements

- 2x Speaker at **DEF CON** official talk 2023, 2024 [info: <u>link</u>]
- Co-speaker at BlackHat Arsenal 2024 [info: link]
- Secured a top 3 position in the 48-hour WittyFeed coding hackathon

#### Certifications

**AWS Certified AI Practitioner** 

**AWS Certified Solutions Architect** – Associate **AWS Certified Security** – Specialty

Amazon Web Services (AWS)

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Amazon Web Services (AWS)