

ABHINAYA S B

Ph.D. Student, Dept. of Computer Science, North Carolina State University
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Research Interests

My research interest lies in establishing the three pillars for a protected Virtual Reality experience—safety, privacy, and security. I am currently working on qualitative studies exploring usable security and privacy for VR.

Education

North Carolina State University (NCSSU), Raleigh, USA **Aug 2022 - Present**

PhD in Computer Science; *Advised by Dr. Anupam Das (WSPR lab)*

CGPA: 4.00/4.00

Courses: Computer and Network Security, Computer Networks, Design and Analysis of Algorithms, Research Methods in Human-Centered Computing, Cryptography, Cellular and Telephone Networks

National Institute of Technology, Tiruchirappalli, India **Jul 2015 - May 2019**

Bachelor of Technology (Honours) in Computer Science and Engineering

CGPA: 9.74/10.00

Publications

Posters

1. Virtual Adventures, Real Challenges: Analyzing Harassment Controls in VR

Abhinaya S B, Aafaq Sabir, Anupam Das
USENIX Security Symposium, Aug 2023.

2. Protego Totalum! Mitigating Harassment in Virtual Reality

Abhinaya S B, Aafaq Sabir, Anupam Das
Graduate Student Research Symposium, NC State University, Apr 2023.

Other Publications

1. A Question Answering and Quiz Generation Chatbot for Education

A S Sreelakshmi, S B Abhinaya, Aishwarya Nair, S Jaya Nirmala
Grace Hopper Celebration India (GHCI), Nov 2019.

2. A Survey of Techniques for improving Security of GPUs

Sparsh Mittal, S B Abhinaya, Manish Reddy, Irfan Ali
Journal of Hardware and Systems Security, Sep 2018.

Employment & Experience

Research Experience

1. Graduate Research Assistant, NC State University **May 2023 - Present**

Perform usable security and privacy research in the domain of Virtual Reality.

Industry Experience

- 1. Engineer, Qualcomm India Pvt. Ltd.** **Dec 2020 - Jun 2022**
Designed a prototype to overcome resource availability constraints for concurrent workloads on the Neural Signal Processor (NSP); added support for testing the NSP across 2 simulators, 1 emulator, 2 Linux and 1 Windows based platforms.
- 2. Associate Engineer, Qualcomm India Pvt. Ltd.** **Jul 2019 - Nov 2020**
Developed a suite of tests and support tools for Snapdragon's NSP that identified 5 critical HW issues; presented work at internal conferences, Qbuzz (India) and ML Summit (international) with 3K+ total attendees.
- 3. Interim Engineering Intern, Qualcomm India Pvt. Ltd.** **May 2018 - Jul 2018**
Analyzed Google's Pixel Visual Core based image capture to derive architectural insights.

Teaching Experience

- 1. Graduate Teaching Assistant, NC State University** **Jan 2023 - May 2023**
CSC 433 Privacy in the Digital Age
- 2. Graduate Teaching Assistant, NC State University** **Aug 2022 - Dec 2022**
CSC 326 Software Engineering

Awards & Honors

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- USENIX Security '23 Diversity Grant Recipient** **Jul 2023**
Awarded 850 USD travel grant to attend the USENIX Security Symposium in Aug 2023.
 - GREPSEC VI Scholar** **Jun 2023**
Awarded 970 USD to attend the GREPSEC VI workshop in Aug 2023.
 - College of Engineering Graduate Enhancement Award** **Apr 2023**
Awarded 2850 USD by the College of Engineering, NC State University.
 - NC State University Graduate Fellowship** **Feb 2022**
Awarded 4000 USD by NC State University.

Service

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- 1. Artifact Evaluation Committee, USENIX Security** **2023**

Skills

Programming	C, C++, Python, Java, Tensorflow, HTML/CSS, Javascript, Three.js, Angular.js
Tools	Dedoose, Android Studio, MATLAB, Network Simulator, Trace32, Zotero, L ^A T _E X
Methods	Survey Design, Interview Design, Qualitative Analysis
Relevant Courses	Usable Security, Human Computer Interaction, Privacy & Security in Online Social Media, Privacy in the Digital Age, Human-Centred Research Methods, Computer and Network Security

Leadership

- Workshop Committee, Women in Computer Science (WiCS), NCSU Jul 2023 - Present
- Vice President, Public Relations, Toastmasters Jul 2021 - Dec 2021
- Secretary, Toastmasters Jan 2022 - Jun 2022
- Manager, Content for Pragyan, technical fest of NIT Trichy 2018-2019
- Manager, Computer Science and Engineering Association, NIT Trichy 2018-2019
- Head, Content for Festember, annual cultural extravaganza of NIT Trichy 2017-2018
- Executive Committee Member, National Service Scheme, NIT Trichy 2015-2016

Mentoring

- Mentored an undergrad from UNC Chapel Hill as part of a qualitative research study
- Mentored two K-12 students from North Carolina School of Science and Mathematics during the Summer Research program