

ABHINAYA (S B) SRIVIDHYA BALAJI

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EDUCATION

North Carolina State University (NCSU)

Raleigh, Aug 2022 - Present

PhD in Computer Science

Expected 2027

Courses: Computer and Network Security, Computer Networks

National Institute of Technology, Tiruchirappalli (NIT Trichy)

India, Jul 2015 - May 2019

Bachelor of Technology (Honours) in Computer Science and Engineering

CGPA: 9.74, Rank: 2 / 101

SKILLS

Additional Courses Usable Security, Human Computer Interaction, Privacy & Security in Online Social Media
Programming C, C++, Python, Java, Tensorflow, HTML/CSS, Javascript, Three.js, Angular.js
Software Android Studio, MATLAB, Network Simulator, Trace32, Zotero, L^AT_EX

WORK EXPERIENCE

NC State University, Dept. of Computer Science, TA & RA

Raleigh, Aug 2022 - Present

- **Research Assistant** in Prof. Anupam Das' group: Perform Usable Security and Privacy Research in Virtual Reality.
- **Teaching Assistant** for CSC 326 (Software Engineering): Conduct labs and debugging sessions for students.

Qualcomm, Software Architecture team, Engineer

Bengaluru, India, Jul 2019 - Jun 2022

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

RESEARCH & PUBLICATIONS

B.Tech. Thesis: Chatbot for Education, Prof. Jaya Nirmala

NIT Trichy, Jan 2019 – May 2019

- Implemented a Question Answering and Quiz Generation Chatbot for Education using NLP techniques in Python. Presented at **Grace Hopper Celebration India, 2019**, and published in IEEE Xplore. [Paper]

System-level Optimization of ADV algorithms, Prof. Mittal

IIT Hyderabad, Dec 2018 – Jan 2019

- Conducted experiments for system-level optimization of ADV perception algorithms (YOLOv3) for embedded systems (NVIDIA Jetson Xavier & Nano) using ROS. Poster presented at Intel India Research Colloquium, 2019.

Literature Review: Security in GPUs, Prof. Mittal

IIT Hyderabad, Dec 2017 - Jan 2018

- Reviewed research on security in GPUs and published in the Journal of Hardware and Systems Security. [Paper]

Cluster Head Selection Algorithm for WSNs, Prof. Nithya

NIT Trichy, Oct 2017 – Nov 2017

- Developed and analyzed a clustering algorithm using MATLAB that indicated an improvement of the WSN network lifetime by 150% compared to LEACH. Presented at GUCON 2018, and published in IEEE Xplore. [Paper]

Database to Animation Framework for Chemistry, Prof. Phatak

IIT Bombay, May 2017 – Jul 2017

- Designed a Three.js based framework to illustrate Chemistry concepts via 3D animations during the Eklavya internship programme. Supported by National Mission on Education through ICT (NME-ICT), India. [Report]

LEADERSHIP

2021 Vice President, Public Relations, Qonverse, Toastmasters club at Qualcomm, Bengaluru, India
2017-18 Head, Content for Festember, annual cultural extravaganza of NIT Trichy
2018-19 Manager, Content for Pragyan & Computer Science and Engineering Association, NIT Trichy
2015-16 Executive Committee Member, National Service Scheme, CSE dept., NIT Trichy