

# Ayush Agarwal

aagarwa@ucsd.edu | 858-214-7337 | www.agarwalayush.in | linkedin.com/in/ayushagarwal95 | github.com/ayushagarwal95

---

## EDUCATION

### University of California, San Diego (UCSD)

*Masters of Science in Computer Science*

Coursework: Computer Security, Computer Architecture, Operating Systems, Virtualisation, Database Systems

San Diego, CA

Mar 2021 - Dec 2022

### Vellore Institute of Technology (VIT)

*B.Tech in Computer Science and Engineering*

Coursework: Operating Systems, Database Systems, Computer Networks, Software Engineering, Theory of Computation

Vellore, India

Jul 2013 - May 2017

## SKILLS

C, Python, Node.js, C++, HTML, CSS, JavaScript, SQL, MongoDB, Git, Linux, Shell/Bash, GDB, nftables

## EXPERIENCE

### VMware Inc.

*Member of Technical Staff - Intern*

CA, USA

Jun, 2021 – Sep, 2021

- Developing a tool allowing users to drag and drop elements to create a workflow which could be executed on a testbed
- Designing & implementing the application end-to-end: UI, Flask server, execution service
- Technologies: Python, HTML, CSS, JavaScript, Angular, jsPlumb

### Cisco Systems Inc.

*Software Engineer I-II*

Bengaluru, India

Aug, 2017 – Jan, 2021

- Optimised remote attestation workflows enabling better integration of IOS-XR with Crosswork Trust Insights.
- Designed & implemented secure storage services for TPAs based on Cisco TAM allowing customers to store secrets on box.
- Delivered an automated solution for the long standing issue of duplicate symbols in the OpenSSL libraries in XR.
- Replaced the custom implementation of SSH on XR by integrating OpenSSH including all the features offered by XR SSH.
- Built a comprehensive dashboard to track RAM usage in XR & workflows to automatically populate the data nightly.
- Technologies: C, Linux, Trusted Computing, Python (Scripting & Automation); Secure Storage: Go, Vault APIs

### Cisco Systems

*Software Engineering Intern*

Bengaluru, India

Jan, 2017 – Jun, 2017

- Investigated and built a prototype for the packet tracing infrastructure on XR for the NCS55XX series of routers.
- Enhanced debug-ability on IOS-XE based on inputs from Cisco TAC engineers.
- Technologies: C, Wireshark, NPU Programming, tcpdump

## PROJECTS

### Sandboxing libopus in Firefox (UCSD, Computer Security)

2021

- Sandboxed the Opus media library in the browser to reduce the attack surface with minimal impact to audio performance.
- Used the RLBox framework, measured performance impact and currently in process of upstreaming the changes made.

### VITacademics (VIT)

2015 – 2017

- Developed and maintained the client applications & the server API to scrape information off of VIT's academic portals.
- Helped 12,000+ students track their attendance, grades, timetables with ease.
- Technologies: Node.js, MongoDB, Heroku

## ACHIEVEMENTS

- Won the **1<sup>st</sup> prize** in the CTF Challenge in Cisco SecCon (Cisco's Annual Security Conference), APJC region, 2020.
- Won the **1<sup>st</sup> prize** in the Cisco Service Provider Innovation Challenge (Internal Hackathon), India, 2019
- Won the **1<sup>st</sup> prize** in the Cisco Service Provider Game of Codes (Internal Hackathon), India, 2018
- **VIT Merit Scholarship:** Received **thrice** for being in the **top 1%** of my department, based on academic excellence.
- **Department Rank 4** for 2 consecutive years in a batch of 700 in Computer Science and Engineering.

## ROLES & RESPONSIBILITIES

- **Teaching Assistant:** Responsible for conducting discussion sessions, office hours, grading & preparing assignments.  
*Computer Organisation and Systems Programming (Spring '21, Fall '21, Winter '22)*
- **Organizer, graVITas 2016:** Managed all the technical requirements of the fest - website, apps, portals for management.
- **President, IEEE CS-VIT, 2015:** Organised several events, seminars & workshops on computing technologies.