

Rut Vora

contactme@rutvora.com

EDUCATION

THE UNIVERSITY OF BRITISH COLUMBIA (UBC)

MS IN COMPUTER SCIENCE

(Expected) Nov 2024

Vancouver, Canada

BITS PILANI

B.E. IN COMPUTER SCIENCE

Aug 2020

Hyderabad, India

LINKS

<https://rutvora.com>

[Github:// rutvora](https://github.com/rutvora)

[LinkedIn:// rutvora](https://www.linkedin.com/in/rutvora)

[Blogspot:// rutvora](https://www.blogger.com/blogspot/rutvora)

COURSEWORK

GRADUATE

Systems Security

Automated Testing

Human-Computer Interaction - AR/VR

Graduate Operating Systems

Real-time Distributed Systems

Data Management

UNDERGRADUATE

Object Oriented Programming

Data Structures and Algorithms

Computer Networks

Network Programming

SKILLS & INTERESTS

SKILLS

- Golang
- Docker
- eBPF/XDP
- CXL
- C/C++
- Git
- P4
- Linux
- WASM
- DPDK

INTERESTS

- Distributed Systems
- Systems and Network Security
- Network Acceleration

WORK EXPERIENCE

THE UNIVERSITY OF BRITISH COLUMBIA

GRADUATE RESEARCH ASSISTANT, SYSTOPIA LAB @ CS

September 2022 - Present | Vancouver, Canada

NetShaper:

- Developed a portable network side channel mitigation system using differential privacy with customisable trade-offs between privacy, bandwidth and latency (W.I.P) **Side Channels in CXL Memory Pooling Solutions:**

- Exploring side-channel exploits possible due to resource contention at CXL controllers in CXL memory pooling solutions (Type-3 Devices)

F5 NETWORKS

SDE IN THE INNOVATION LAB, OFFICE OF THE CTO

September 2020 – August 2022 | Hyderabad, India

- Used WASM to provide in-process isolation to external (untrusted) modules
- Developed a solution to offload F5 DDoS protection and proxy to SmartNICs
- Enabled unmodified applications to leverage DPDK instead of the Linux kernel
- Used P4 to inject proprietary information inside SRv6 headers (Patent Pending)
- Leveraged eBPF to detect and prevent potential attacks in a PaaS environment

ERICSSON | RESEARCH INTERN

July 2019 – December 2019 | Chennai, India

- Developed a solution using 5G mmWave and leaky-wave antennas to eliminate the Doppler effect in mobile networks caused by high-speed transportation
- Proposed methods to use network slicing for enhancing 5G network utilisation

PUBLICATIONS

NETSHAPER: A DIFFERENTIALLY-PRIVATE NETWORK SIDE CHANNEL MITIGATION SYSTEM

A. SABZI, R. VORA, S. GOSWAMI, M. LECUYER, M. SELTZER, A. MEHTA

USENIX-Security '24 | [View here](#)

PROVISIONING OF BROADBAND COMMUNICATION FOR PASSENGERS IN HYPERLOOP USING 5G NETWORKS

R. VORA, R. M. KARTHIK, M. SARAVANAN

ICTCS 2019 | Edition 1, PP:317-329 | [View here](#)

COMPETITIONS AND HACKATHONS

SMART INDIA HACKATHON

TRANSMITTING DISASTER RELIEF INFO VIA NAVIGATION SATELLITES

March 2019 | Ahmedabad, India

- Transmitting disaster relief information via Indian navigation satellites (IRNSS)
- Transmitting 10 safe locations with 100m² accuracy a 220-bit transmission
- Developed a simulation to demonstrate the transmission of the emergency broadcast to the devices in the affected area

MICROSOFT HACKATHON

P2P NETWORK FOR CRITICAL COMMUNICATION DURING DISASTERS

October 2018

- Targeted for natural disasters where telecom services are unavailable
- Developed an application to automatically transmit and propagate user's location and safety status using Bluetooth and WifiDirect Service Discovery
- Created an application for rescue workers to locate trapped users