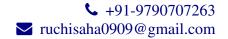


# Ruchi Saha



#### **EDUCATION**

<b>Dual Degree (BTech + MTech) Computer Engineering</b> , CGPA: 8.89/10 Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram	(2015 - 2020)
Class XII, Percentage: 91.8%, Kendriya Vidyalaya AFS Uttarlai	(2013 - 2014)
Class X, CGPA: 10/10, Kendriya Vidyalaya AFS Uttarlai	(2011 - 2012)
WORK EXPERIENCE	

### Backend Server Engineer, Samsung R&D Institute India-Delhi

(Jan'21 - Present)

- Tech Stack: Microservices, Scala, Redis, Postgres, Kubernetes, AWS, Cloud System Design
- Designed and developed microservice based softwares, which collects data from several continents to empower Samsung TV+ services. Added features for improved monitoring of data quality.
- Developed a new system to process data in any json format for expansion of core business. Also ensured easy integration of newly created system into existing one.
- Redesigned core systems which improved data correctness to  $\sim 100\%$  and also provided a better scalability with reduced processing time. The system processes more than 100Gb of data every day.
- Fixed legacy issues in a critical service which minimised 5xx errors on servers. The system uses CDN and serves more than a million requests a day directly to active Samsung's Smart TVs.
- Performed failure identification and recovery at pod level in Kubernetes (infrastructure level using AWS CLI).
- *Innovation:* Awarded 'Best In Development Business Idea' at the organisational idea-demo. Won a prize for a chosen concept in the department-level ideathon. Conducted multiple events to promote innovation culture in the department. Focused on inter and intra team innovations as well as innovations for Samsung TV+ services.

## Network Analyst (Intern), GAVS Technology

(May'18 - Jul'18)

- Tech Stack: Lua, C++, Kafka, Solr
- Established data pipleline from open source packet sniffer to solr server, transferring hundreds of records per second.

### ACADEMIC WORK EXPERIENCE

## Network Systems Researcher (Final Year Project/ Master's Thesis), IIITDM Kancheepuram

(Nov'19 - Jul'20)

- Tech Stack: Python, FPGA (Programable hardware), Verilog, Vivado, Network System Design, IPv4 Packet Forwarding
- Developed a FPGA-based Multi-match Packet Classification Architecture for Network Intrusion Detection Systems.
- Achieved 5.9x higher performance while consuming 5x lower resource. Also enabled configuration time scaling of designed hardware.
- Work submitted to the journal of Computer Systems Science and Engineering (A short summary of work here).
- Project supervised by Dr Noor Mahammad SK, supported by Ministry of Electronics and Information Technology, Govt. of India.

## Cryptography Research Intern, IDRBT, Hyderabad

(May'19 - Sep'19)

- Tech Stack: Python, Cryptography
- Researched on Data Integrity and Deduplication in fog to cloud based IoTs (link), Supervised by Dr P Syam Kumar.
- Work was submitted to Computer Networks journal in Elsevier.

#### Design Thinker (Waste Management), IIITDM Kancheepuram

(Jul'16 - Nov'17)

- Tech Stack: Design Thinking
- · Worked towards minimising litter around Dustbins. Spent hours sitting close to trash cans observing how people behaved around them.
- Done stakeholder analysis and feedback loop analysis for the same. Work supervised by Dr. Sudhir Varadarajan.

#### SKILLS

**Programming Languages** Scala, Python, Java, C++, NodeJs

Cloud and Software Technologies Microservices, System Design, Kubernetes, Docker, AWS

**Databases** Redis, PostgreSQL

Tools Git, Jenkins, Kibana, Grafana, Sensu, Intellij, PyCharm, Visual Studio, LaTeX

Additional Skills Research, Innovation, Event Management

#### **AWARDS & HONORS**

Ford CSAM IoT Security Paper Presentation (link), Won Best Paper Award School Captain, Kendriya Vidyalaya AFS Uttarlai

(2019)

(2013 - 2014)

School Vice Captain, Kendriya Vidyalaya AFS Uttarlai

(2012 - 2013)