

NIKHIL SHARMA

SDE @ AMAZON | CSE Postgrad @ IIT Bombay | AIR 31 GATE CSE 2022

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New Delhi, India

EXPERIENCE

Amazon

SDE, Software Development Engineer

Jan 2025 – Present

- Delivered new features for the IN marketplace as a key developer on the **Instant Bank Discount (IBD)** team, including **secure decryption integrations**, partner onboarding services, and logic for complex **discount splitting**.
- Contributed to tokenized account number integration for **RBI compliance**, a mandatory security measure for the IBD service.
- Engineered a **full-scale CI/CD pipeline**, boosting service reliability with automated dependency scanning, code coverage, and robust testing (**integration, load, canary**) supported by metric-driven **alarms and rollbacks**.

Honda RnD Japan

SDE, Software Development Engineer

Oct 2024 – Jan 2025

- Developed a C++ application for **bidirectional communication** between ECUs over a CAN bus in an **autonomous vehicle**.
- Transmitted ECU state data to **AWS IoT Core**, creating a C++ module that used Bash scripts and the **MQTT protocol**.

INTERNSHIP, TA & FREELANCING

Honda RnD Japan

RnD Intern

June 2024 – Sept 2024

- Researched various **Vehicle Routing Problem** algorithms and developed a 2-phase algorithm inspired by them.
- Implemented the algorithm in Python and benchmarked it against **Google OR-Tools** on 50 datasets, achieving **better performance** in 50% of the cases.

CSE Dept IIT Bombay

Web Developer & Teaching Assistant

July 2022 – June 2024

- Led web projects for the CSE Dept., integrating a new front-end and building a Python data pipeline (**Scrapy, Django**) for course info via **REST API**.
- Mentored students** in cryptography, network security, and blockchain; performed extensive **bug testing** on the department's question-upload portal.

HackerOne

Bug Hunter Freelancer

Jan 2021 – June 2021

- Discovered and disclosed an **IDOR vulnerability** in a **renowned social media application**, potentially allowing group admins to modify others' messages.
- Proactively identified and reported **four critical XSS vulnerabilities** on **Glassdoor**, mitigating user **session hijacking** and **cookie theft** risks.

PROJECTS

- Built a **VM and container** from scratch, including a Linux container (using chroot, cgroups) and a KVM-based hypervisor in C.
- Developed a **bicycle auction webapp** using **React** for the front-end, a **Django** RESTful API for the back-end, and **JWT** for secure user authentication

EDUCATION

IIT Bombay

M.Tech in Computer Science & Engineering

2022 - 2024

Mumbai

- CGPA : 8.79

Delhi Technological University (DTU)

B.Tech in Software Engineering

2017 - 2021

New Delhi

- CGPA : 6.56

THESIS

RapidP2P: Incentivizing low latency in a P2P network

Masters Thesis | Guide: Prof. Vinay Ribeiro

June 2023 – June 2024

- Developed a **novel incentivization protocol** RapidP2P to promote high-speed data transfer and efficiency within a peer-to-peer **decentralized network**.
- Designed a Python-based simulation to validate the protocol's performance and efficiency.

LEADERSHIP

Post Graduate Representative, Department of CSE, IITB

Apr 2023 – Apr 2024

- Led an 18-member student council**, shaping academic policies for over **500 students**.
- Organized and executed major departmental functions, including PG Orientation, the Convocation ceremony, and Valedictory function.

ACHIEVEMENTS

- Secured **All India Rank 31** amongst 77257 students in GATE CS 2022 (Feb'22)
- Best Presentation Award, Research and Innovation Symposium in Computing 2024 (Mar'24)
- Achieved first place alongside my team amongst **21+ IITs** in the Fashion competition (Jan'23)
- Led my team to the **Finale of the PUBG Mobile India Tour** held in Guwahati (Sept'19)

SKILLS

- System skills:** DSA, DBMS, Operating System, Computer Networks, Blockchain, Virtualization, Containerization, Web Security
- Languages:** C, C++, Java, Python, Solidity, Javascript, Bash, PHP, SQL
- Tools & Libraries:** Django, Spring, Postgres, Git.