

Abdul Rafey Ahmad

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WORK EXPERIENCE

Open Source Contributor, Tor Project (Rust , Java)

Jan 2025 - Present

- Contributed to the **arti-client** and **hs-service** crates, adding features to enhance the performance and security of Tor's Rust-based implementation.
- Improved the circuit management logic in **arti-client**, reducing latency in establishing Tor circuits.
- Modified and optimized the **Network Library Java API** to enhance performance and security in Tor's ecosystem.

DevOps & Backend Intern, Soundverse.ai

Mar 2025 - Present

- Architected a production MLOps pipeline on Kubernetes for continuous integration and delivery (CI/CD) of fine-tuned generative audio models, automating model quantization (GPTQ), containerization with Docker, and canary deployments via TorchServe, which accelerated the model-to-production lifecycle by 85
- Engineered a distributed, GPU-aware task queue using Celery, Redis, and NVIDIA Triton Inference Server to manage asynchronous inference requests for a Transformer-based music generation model.

PROJECTS

Packet Sniffer - Rust, TUI

[Link to Demo](#)

Developed a packet sniffer in Rust using the C **'Pcap'** library for capturing raw network packets. Integrated a terminal user interface (TUI) with **'Rattui'** for real-time interactive packet data inspection.

QueueShopper - Kafka, Node.js, MySql

[Link to Demo](#)

Developed a distributed order processing system using Apache Kafka for message queuing and Mysql for persistence. Implemented producer-consumer architecture to ensure high throughput and fault tolerance in handling e-commerce transactions.

Collaborative Code Editor - React, Yjs, WebSockets

[Link to Demo](#)

Developed a real-time collaborative code editor with VSCode-like features. Utilized CRDT (Conflict-Free Replicated Data Types) with Yjs for distributed data synchronization and WebSockets for low-latency communication.

Hotel Management System Simulator – Java, MySQL, Micros Sim

[Link to Demo](#)

Simulated a full-stack hotel management system backend with Java and MySQL, integrating mocked Micros POS flows to model guest check-in/check-out, service requests, and billing. Focused on system uptime and fault-tolerance by simulating service recovery patterns and logging-based diagnostics.

EDUCATION

2022 - Present **Indian Institute of Information Technology, Kottayam**

8.1 CGPA

B.Tech, Computer Science and Engineering with specialization in Cyber Security

PUBLICATIONS

Representational Power of Weighted Randomized Regression Trees

[Link to Paper](#)

Explored theoretical concepts of weighted ensembles of regression trees to enhance accuracy.

SKILLS AND COMPETITIVE PROGRAMMING

Languages Rust, Java, C/C++ JavaScript, Python, Node.js, **PostgreSQL, MySQL , DB2 , MICROS**
Tools AWS (EC2, S3, Lambda), Docker, Kubernetes, Git
Competitive **LeetCode Knight (1947 max) 300+ Solves, Codewars 3 Kyu**