Abdul Rafey Ahmad

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WORK EXPERIENCE

React Developer, BUILDFAST Sept 2023 - Oct 2023

Engineered modular and reusable React components to optimize UI efficiency and scalability. Integrated PostgreSQL with backend services using RESTful APIs, enhancing data retrieval speed and overall system performance by reducing query execution time.

Sub Technical Lead, Open Source Club Nov 2023 - July 2024

– Led a team of developers in contributing to open-source projects using Git.
– Conducted code reviews and resolved merge conflicts to maintain repository quality.

PROJECTS

Collaborative Code Editor - React, Yjs, WebSockets Link to Demo

Developed a real-time collaborative code editor with VSCode-like features, enabling multiple users to write, edit, and manage code concurrently. Utilized CRDT (Conflict-Free Replicated Data Types) via Yjs for distributed data synchronization and WebSockets for low-latency communication. Implemented a robust failure handling system to ensure data consistency and fault tolerance during network disruptions.

Packet Sniffer - Rust, TUI Link to Demo

Developed a packet sniffer in Rust using the C '**Pcap**' library for capturing raw network packets. Implemented custom packet parsing logic for detailed packet inspection. Integrated a terminal user interface (TUI) with '**Rattui**' to provide a real-time, interactive view of packet data.

CTF Platform - React, Node.js Link to Demo

Developed an interactive Capture the Flag (CTF) platform featuring a sleek React frontend and a Node.js backend. The platform enables users to browse and solve challenges. Integrated an admin interface for creating and managing custom challenges, enhancing the flexibility of the platform for hosting various CTF events.

EDUCATION

| 2022 - Present | **Indian Institute of Information Technology**, Kottayam | 8 CGPA |
| | B.Tech, Computer Science and Engineering | |

PUBLICATIONS

Study of the Representational Power of Weighted Randomized Regression Trees 2023

Explored theoretical concepts of weighted ensembles of randomized regression trees to enhance predictive accuracy in machine learning models.

SKILLS

Languages	React, Rust, PostgreSQL, Node.js, MySQL, TypeScript, Python
Tools	AWS (EC2, S3, Lambda), Docker, Kubernetes, Git