Anirudh Rowjee

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EDUCATION

PES University — Bangalore, India
Bachelor of Technology, Computer Science and Engineering — *2020 - 2024*

EXPERIENCE

Bytebeam — Bangalore, India
Systems Engineering Intern — *Jun 2023 - Jul 2023*
- **Highly Parallel MQTT load testing utility in Rust**: Designed and Implemented a highly parallel load-testing utility for MQTT Brokers in Rust
- **Next-Generation Distributed MQTT Broker in Rust**: Designed and Implemented components of a distributed commit-log based MQTT Broker in Rust

PES Innovation Lab — Bangalore, India
Project Intern - PseudoDeploy — *Jun 2022 - Aug 2022*
- **PseudoDeploy Library**: Spearheaded the design and implementation of Pseudodeploy, a python library to allow easy emulation of arbitrary federated learning deployments and network topologies, enabled by Kubernetes.
- **PseudoDeploy Build Infrastructure**: Designed and Implemented Docker Image Build toolchain to utilize Multi-Stage Docker Builds for efficient, customizable Federated Learning Client and Server Image Builds.

Microsoft Technology Center — Bangalore, India
Student Developer — *Apr 2022 - Jun 2022*
- **IoT-based Real-Time Hydroponics Monitoring System**: Designed and Implemented a real-time IoT Based Hydroponics Monitoring system, enabled by the Azure stack and using embedded hardware - Worked on Power BI, Stream Analytics, Azure Event Hub

PROGRAMMING SKILLS

- **Languages**: Rust, Golang, Python, SQL, HTML, CSS, JavaScript, C   **Technologies**: Git, Github, React, Django, Express, MySQL, Linode

PROJECTS

- **Jumpnet**: A Golang clone of Kafka that uses the Raft Consensus Algorithm to pass messages between different brokers
- **Saaru**: Saaru is a static site generator like Eleventy written in Rust. It features a minimal Deep Data Merge and renders a website with 50 files in ~35ms
- **BunSamosa-Bot**: A Github Bot and REST API to process comments on Pull Requests and maintain a leaderboard, written in Golang and using SQLite - hosted entirely on a 1G RAM VPC
- **Displacement**: A minimal FTP Client Written in Rust, Implemented per IEEE RFC 959 - works with most popular FTP Servers as a command-line interface tool
- **E2EE Toolkit**: Flask-based Web Application implementing the Diffie-Hellman-Merkle Key Exchange and End to End Encryption between users in a chat application. Implemented encryption from scratch.
- **Hypeviewer**: A Rust clone of the pipeviewer Linux utility, utilizing multithreading, cross-thread communication and concurrency to efficiently display statistics
- **Electronic Election System**: A Django-based full-stack web application to conduct and run student council elections, designed to allow multiple students to vote at once.
- **Hyperion**: A minimal, learning clone of a database written in C

RESEARCH INTERESTS

Databases, Distributed Systems, CRDTs

VOLUNTEERING EXPERIENCE

- **Core Team Lead, HackerSpace PESUECC**: Club head of HackerSpace PESUECC, a student-run developer community with an Open-Source wing.
- **Vice-Chairperson, ACM PESUECC**: Vice-Chairperson of the Student Chapter of the ACM at my University, ACM PES University Electronic City Campus