

Ritik Kumar

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SUMMARY

Back end and DevOps programmer interested in Computer Networks & Protocols, Cloud and Distributed Computing. Open Source contributor.

EDUCATION

B. TECH., COMPUTER SCIENCE AND ENGINEERING

CUMULATIVE GPA 8.367/10

Indian Institute of Technology, Roorkee, India (2021)

SENIOR SECONDARY EDUCATION

BOARDS 92%

SKILLS

LANGUAGES

Comfortable

Python, Java, Go, JavaScript, TypeScript, HTML/CSS, bash

Familiar

Kotlin, C, C++, C#, Q#, CoffeeScript

FRAMEWORKS/LIBRARIES

AWS Boto, Django, Android Java Framework, Bee (Go), React JS

SOFTWARE/TOOLS/SERVICES

Git, Sentry, make, Doxygen, ssh, Nginx, Docker, Docker-compose, EFK MongoDB, PostgreSQL, Postgis, Redis Cache, Elastic Search eBPF, Mininet, Wireshark, Tcpdump, nc Heroku, Firebase-GCP, AWS

RESPONSIBILITY

- Back-end & Systems Developer and Mentor @MDG IIT Roorkee.
- Product Manager @Appetizer.
- Volunteer @NSS IIT Roorkee.

EXPERIENCE

NETWORK STREAMING ANALYTICS SYSTEMS FOR LAST-MILE NETWORKS | RESEARCH INTERN | LINK

UCSB, USA

- Capture packet-level data from the last mile network devices.
- Studied and developed eBPF-XDP based pipeline for packet collection in the Linux kernel.
- Analysed various approach to achieve efficient collection & compression.

FAMPAY | BACKEND REMOTE INTERN | LINK

Bangalore

- Set up EFK Log Pipeline
- Add user location-based filter storing them in Postgis.
- Add new KYC and sign-up flows, among other things.

MICROSOFT EDGE | SOFTWARE DEVELOPER REMOTE INTERN

Microsoft 2020

- Developed a new feature to share EDGE Collections.
- Modified the Edge's codebase to modify and expose the API.

GOOGLE SUMMER OF CODE | STUDENT DEVELOPER | LINK

Named Data Network 2019

A photo and file-sharing peer-to-peer decentralised application built for Android on NDN (ICN). Access control is ensured using encryption, and data is fetched using AIMD pipelined Segment-Fetcher.

- Added the AIMD Segment-Fetcher for their Java Support Library.
- Updated the user Identity management application for NpChat.

BLOGS | TECHNICAL WRITER | LINK

Wrote some blogs on Computer Networks and Protocols.

PROJECTS

APPETIZER | PRODUCT MANAGER & BACK END HEAD | LINK

MDG IIT Roorkee

Appetizer is an official mobile application for IIT Roorkee aiming towards the management of mess functionalities. Features include providing mess menu, recording students' presence, giving a rebate, and simplifying feedback processes.

- Developed new features on the back end while maintaining existing ones.
- Worked on Database Query optimization and reducing Network Traffic.
- Implemented and tested multi-messing feature.

CODEPHILE | BACK-END HEAD | LINK

MDG IIT Roorkee

Codephile is a social networking application for competitive coders.

The tech stack includes Redis Elasticache, ElasticSearch, AWS-EC2, Firebase, Nginx, MongoDB, docker & Bee.

- Headed & mentored the back-end development and server deployment.

ACHIEVEMENTS

- Ran Appetizer in the campus for 1 yr with the average DAU exceeding 3500.
- Our team stood 3rd in the Hackinthenorth hackathon at IIIT Allahabad.