

Ritik Kumar

Portfolio GitHub LinkedIn Medium
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SUMMARY

Backend engineer interested in Computer Networking, Cloud and Distributed Computing. Experienced in developing new features for web & mobile apps and deploying/managing mobile apps on campus. Proven track record in open source contribution. Always eager to learn and grow in the field of computer science and engineering.

EDUCATION

B. TECH., COMPUTER SCIENCE AND ENGINEERING

CUMULATIVE GPA 8.49/10

Indian Institute of Technology, Roorkee, India (2021)

SENIOR SECONDARY EDUCATION

BOARDS 92%

SKILLS

LANGUAGES

Comfortable

Python, Java, C#, JavaScript, bash, PS

Familiar

C/C++, Q#, Go, TypeScript, HTML/CSS

FRAMEWORKS/LIBRARIES

Django, Android Java Framework, React JS, .NET, EF Core

SOFTWARE/TOOLS/SERVICES

Git, Sentry, make, ssh, Nginx, Docker, Service Fabric, EFK

MongoDB, PostgreSQL, Redis Cache eBPF, Mininet, Wireshark, nc

Heroku, Firebase-GCP, AWS, Azure

GNU/Linux Ubuntu 22.04.1 LTS,

Windows 11 Home

RESPONSIBILITY

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

EXPERIENCE

MICROSOFT | SOFTWARE DEVELOPER ENGINEER

Bengaluru | July 21 - present

- Designed and developed a Software Integration Infrastructure from scratch, enabling early performance issue detection in new releases
- Implemented new features for the Azure Networking stack
- Executed extensive benchmarks to optimize control plane operation performance.
- Designed and implemented improvements for enhanced performance and reliability
- **Tech Stack:** Azure Service Fabric, C# Dotnet, python, PowerShell, EF Core.

FAMPAY | BACKEND INTERN | LINK

Bangalore | Aug 20 - Oct 20

- Designed an EFK log pipeline to collect and analyze log data.
- Developed new KYC - sign-up flows to streamline user onboarding experience.
- **Tech Stack:** Docker, Python, AWS, Django, bash, Linux, PostgreSQL.

MICROSOFT | SOFTWARE DEVELOPER INTERN

Hyderabad | May 20 - July 20

- Designed and developed a sharing feature for Edge Collections
- **Tech Stack:** TypeScript, React.js, C++.

GOOGLE SUMMER OF CODE | STUDENT DEVELOPER | LINK

Named Data Network 2019

- Developed NPChat, a decentralized P2P application that enables media-sharing using NDN, with access control secured using asymmetric key cryptography.
- Enhanced the user identity management application for NPChat, ensuring its security and usability for users.

BLOGS | TECHNICAL WRITER | LINK

Authored several blog articles on computer networks and protocols, sharing insights and knowledge on topics such as QUIC, Raspberry Pi, etc.

PROJECTS

NETWORK STREAMING ANALYTICS | RESEARCH INTERN | LINK

UCSB, USA | Sept 20 - May 21

- Captured and analyzed packet-level data from last-mile network devices.
- Designed and developed an eBPF-XDP-based pipeline in the Linux kernel for efficient packet collection and compression.
- Researched various approaches to packet collection and compression.

APPETIZER | PRODUCT MANAGER & BACKEND HEAD | LINK

MDG IIT Roorkee

- Developed new features for the Appetizer mobile app, the official app for IIT Roorkee that manages mess functionalities while maintaining existing features.
- Optimized database queries, reduced network traffic, upgraded network protocol and implemented containerization to enhance overall performance and scalability.

ACHIEVEMENTS

- Managed Appetizer's successful deployment with an average DAU exceeding 3500
- Earned 3rd place with out team in the Hackinthenorth hackathon at IIIT Allahabad.