

# 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 a Software Integration Infrastructure, enabling early performance issue detection in new releases
- Collaborated on new features for Azure Networking stack
- Executed extensive benchmarks to optimize control plane operation performance.
- Designed and implemented improvements for enhanced performance and reliability.

### 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.

### MICROSOFT | SOFTWARE DEVELOPER INTERN

Hyderabad | May 20 - July 20

- Designed and developed a new feature for Edge Collections to enable sharing and syncing of collections, improving collaboration across teams.

### 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.