

Aditya Joshi

Nainital, India
B.Tech in Computer Science and Engineering

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SUMMARY

CS engineer with experience in backend development and network programming. Proficient in building scalable infrastructure using Go, Kafka, PostgreSQL, and Kubernetes. Strong foundation in operating systems, TCP/IP stack, and cloud-native architecture. Skilled in designing batch processing pipelines, implementing rate limiting, and optimizing database performance.

EDUCATION

- VIT Bhopal University**
B.Tech — Computer Science and Engineering (CGPA 8.41/10) 2022–2026
- UCSS, Kaladhungi (Nainital)**
CBSE — Class XII (PCM) 88.4% 2022
- UCSS, Kaladhungi (Nainital)**
CBSE — Class X 94% 2020

EXPERIENCE

- BashCraft Club, VIT Bhopal**
Founder and President Dec 2024 – Present
 - Founded and led a 50-member team; executed 10+ events with 600+ participants, increasing club visibility by 3x.
 - Hosted a podcast with a Senior Staff Engineer at Google on system design, LLMs, and real-world engineering, with 100+ attendees.
 - Organized a finance webinar with Zerodha and a fintech hackathon with 280+ participants.
 - Elected president twice; established 5 specialized teams and served on the core board.

PROJECTS

- TCP/IP Stack** 2024
C • TCP/IP • Network Protocols (ARP/IP/VLAN)
 - Developed a TCP/IP stack in C to simulate multi-node networks with custom routers and switches.
 - Implemented ARP, MAC learning, IP routing (L3), and VLAN support.
 - Engineered a custom GLThread with embedded data for 40% faster access and lower memory overhead.
- Swaasthya: Hospital Management System** Grand Finalist SIH'24 2024
Go • Docker • Kafka • Kubernetes • PostgreSQL • Redis
 - Engineered a scalable hospital management system with region-based DB sharding and full container orchestration.
 - Integrated Redis for IP-based rate limiting and smart queueing to ensure fair and stable request handling.
 - Used Kafka for batch processing, reducing PostgreSQL load by 80% and enabling near real-time updates.
 - Added Bloom filter to prevent duplicate inserts and reduce DB queries by 40%.

TECHNICAL SKILLS

- Languages:** Go, Java, C
- Databases:** PostgreSQL, MySQL, MongoDB, Redis
- Technologies:** Apache Kafka, Docker, Kubernetes, AWS
- Frameworks:** Gin
- Tools:** Git, Linux, VS Code
- Core Competencies:** Microservices, REST APIs, CI/CD, Cloud-native architecture, Network Programming

CERTIFICATIONS

- IBM Certified** – DevOps, Agile, and Design Thinking (2025)
- ETHNUS Certified** – AWS Solutions Architect (2025)
- NPTEL Certified** – Cloud Computing (2024)
- Udemy Certified** – Operating Systems (2024)

CO-CURRICULARS AND ACHIEVEMENTS

- Grand Finalist** — Smart India Hackathon 2024 *Led a team to win the internal round out of 400+ teams.*
- Grand Finalist** — IIC 2024 *Led backend design and architecture; shortlisted from 600+ applicants.*
- Top 1%** NPTEL *Scored 88 and ranked in the top 1% of 24,000 students in NPTEL Cloud Computing.*
- AWS Cloud Club** *Hosted AI/LLM sessions with AWS engineers, engaging 200+ participants.*