

# Aditya Joshi

Nainital, India  
B.Tech in Computer Science and Engineering

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## SUMMARY

Computer Science undergraduate with experience in backend development and network programming. Skilled in designing scalable infrastructure using Go, Kafka, PostgreSQL, and Kubernetes. Proficient in operating systems, cloud-native architecture, and TCP/IP stack.

## EDUCATION

- **VIT Bhopal University**  
*B.Tech — Computer Science and Engineering (CGPA 8.49/10)* 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*  
*Go • Docker • Kafka • Kubernetes • PostgreSQL • Redis* 2024
  - 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.*