

Aditya Joshi

+91-9149196218 | aditya03joshi@gmail.com | linkedin.com/in/adityajoshi | github.com/adityajoshi

EDUCATION

VIT Bhopal University

Bachelor of Technology in Computer Science and Engineering; CGPA: 8.49/10.0

Sehore, MP

Aug 2022 - Aug 2026

TECHNICAL SKILLS

- **Programming Languages:** Go, Java, C, MySQL, PostgreSQL, Redis, Python, HTML, CSS
- **AWS & Cloud:** EC2, S3, Lambda, DynamoDB, RDS, IAM and more
- **Tools & Technologies:** Docker, Kubernetes, Apache Kafka, CI/CD, Linux, Shell Scripting

CERTIFICATIONS

- **IBM Certified – DevOps, Agile, and Design Thinking** (IBM)
- **IBM Certified - Agile Methodologies** (IBM)
- **IBM Certified - DevOps Fundamentals** (IBM)
- **UDEMY Certified – Operating Systems** (UDEMY)

PROJECTS

Swaasthya - A Centralised Hospital System | *Go, PostgreSQL, Redis, Apache Kafka, Docker, Kubernetes*

- Engineered a scalable hospital management system with region-based database sharding and Kubernetes orchestration, ensuring fault tolerance and high availability across distributed environments.
- Implemented Redis-based IP rate limiting and smart queueing to handle surges in traffic, improving request fairness and preventing server overload.
- Integrated Kafka pipelines for batch processing, reducing PostgreSQL query load by 80% and enabling near real-time synchronization of patient and hospital data.
- Applied a Bloom filter optimization to check record existence across Kafka and PostgreSQL, reducing redundant database queries by 40% and improving data pipeline efficiency.

L2/L3 Network Stack | *C, TCP/IP, ARP, VLAN, IP Routing* | [GitHub](#)

- Designed and implemented a Layer 2/Layer 3 network stack in C, simulating switches and routers across multi-node topologies.
- Built L2 protocols including MAC-based learning and forwarding, VLAN segmentation, and ARP resolution to enable realistic data-link layer behavior.
- Engineered a custom GLThread data structure with embedded metadata, improving traversal speed by 40% while reducing memory overhead.
- Developed L3 routing capabilities with custom IP forwarding logic, ensuring correct packet delivery across networks.

Hostel Grievance System | *React.js, Go, Gin, PostgreSQL, Gomail* | [GitHub](#)

- Built a backend in Go with PostgreSQL to digitize hostel grievance handling and replace the paper-based system.
- Developed dedicated dashboards for students and admins to submit, track, and manage complaints efficiently.
- Integrated Gomail for automated email confirmations, ensuring transparency and timely updates.

CO-CURRICULAR ACTIVITIES

President

Nov 2024 – Present

Bashcraft Club

Campus

- 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.

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.