

Athrv Mittal

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EDUCATION

VIT Bhopal University

B.Tech in Computer Science — CGPA: 8.70

Bhopal, India

Aug. 2022 – May 2026

Sacred Heart Senior Secondary School

CBSE (Class XII), Aggregate: 82.8%

Punjab, India

2021 – 2022

Sacred Heart Senior Secondary School

CBSE (Class X), Aggregate: 88.5%

Punjab, India

2019 – 2020

TECHNICAL SKILLS

Languages & Tools: C++, Python, JavaScript, HTML, CSS, SQL, Git, VS Code

Frameworks & Technologies: React, Node.js, Express.js, Tailwind CSS, WebSockets

Databases & CS Fundamentals: MongoDB, MySQL, Data Structures and Algorithms

Cloud & DevOps: Basic AWS (S3, SQS, DynamoDB), REST APIs, GitHub Workflows

PROJECTS

Vercel-Style Cloud Deployment Platform

May 2025

- Implemented cloud deployment platform with 3 core services: Upload, Deployment, and Request Handler.
- Engineered async workflows via AWS SQS & S3 storage for GitHub cloning, secure builds and static hosting.
- Established Node.js backend in Express, simple-git, Dynamo DB for deployment lifecycle and status tracking.
- Built React frontend for repo submission, deployment status polling, and post-build URL generation.
- Reduced build-trigger times to under 10s by optimizing repo cloning, builds, and static asset delivery.

Efficient Flight Itinerary Optimizer

Aug 2024 – Nov 2024

- Developed multi-criteria flight planner using BFS & Dijkstra for streamlined routes by connections, cost and time.
- Modeled real-world constraints (20-min layovers, ≤ 100 flights/city) with $O(m)$ & $O(m \log m)$ efficiency.
- Attained less than 50ms latency via calibrated graph adjacency lists and heap queues for instant route generation.
- Orchestrated scalable solution handling 10k+ flights for real-time travel planning rivaling commercial systems.

High-Performance Task Scheduler for Trading Systems

Dec 2024

- Built a heap-based task manager achieving $O(\log W + \log T)$ scheduling complexity for real-time trade execution.
- Designed worker-to-strategy mapping achieving sub-millisecond routing for 1000+ concurrent trading signals.
- Implemented priority-based signal routing based on expected alpha, ensuring highest-edge trades execute first.
- Built auto-balancing system redistributing workload across 10+ strategy engines by throughput optimization.

Learning Management System (LMS)

Jan 2025 – Apr 2025

- Cultivated complete MERN stack LMS with role-based JWT authentication and bcrypt-secured login.
- Designed secure REST APIs in Express for course operations, enrollment, and progress tracking.
- Structured React frontend with modular routing (React Router) for role-specific dashboard access.
- Built scalable role system (instructor/student) aligned with identity-based permission control.

SCHOLASTIC ACHIEVEMENTS

Competitive Programming: Reached a 1400+ rating on Codeforces (Specialist) and 1750+ on LeetCode (Top 10% globally), demonstrating strong algorithmic thinking and consistency.

DSA Proficiency: Solved 1000+ problems across LeetCode, Codeforces, and GFG, showcasing commitment to problem-solving and technical mastery.

EXTRA CURRICULAR ACTIVITIES

• GSoc Club – VIT Bhopal (Jan 2025 – Present):

Founding Member and Technical Lead — Spearheaded the establishment of the GSoc Club at VIT Bhopal, mentoring over 50 members in competitive programming, enhancing technical capabilities for future contributions.

• Sports:

Worked on physical endurance and mental resilience by running three 5K races within seven days and training regularly in badminton, steadily improving my stamina and focus.