

ATHRV MITTAL

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Education

VIT Bhopal University

B.Tech in Computer Science - CGPA:8.73

Aug. 2022 – May 2026

Bhopal, India

Technical Skills

Languages & Tools: C++, Python, Java, JavaScript, SQL, Git

Data Analysis Libraries: Pandas

Frameworks & Technologies: React, Node.js, Express.js, Spring Boot

Databases & CS Fundamentals: PostgreSQL, Spring Data JPA, MongoDB, Data Structures and Algorithms

Cloud: Basic AWS (S3, SQS, DynamoDB), REST APIs

Experience

Escorts Kubota Ltd.

June 2025

Industrial Trainee

Faridabad, Haryana

- Eliminated hours of manual work by automating Bill of Materials (BOM) comparisons with Python & Pandas.
- Enabled zero-code-change adaptability for various Excel formats by implementing a flexible PyYAML configuration.
- Quantified a \$485.50 per-unit cost increase for tractors meeting EU emission norms over domestic (Bharat TREM) versions by processing 2,000+ parts in <15s, delivering the final Openpyxl report.

IgniteU Learning Ventures Pvt. Ltd.

Mar 2025 – Apr 2025

Software Development Intern

Noida, Uttar Pradesh (Hybrid)

- Developed a full-stack scheduling platform (Java/Spring Boot & React) to automate alumni-student mock interviews.
- Implemented a secure, role-based REST API to enforce admin-defined mentorship assignments and data access.
- Leveraged an async AI service to convert raw interview feedback into structured, actionable advice for students.
- Engineered the PostgreSQL data model with Spring Data JPA, ensuring integrity across complex user, group, and scheduling relationships.

Projects

Vercel-Style Cloud Deployment Platform | AWS SQS, S3, Node.js, Express, DynamoDB, React

May 2025

- Engineered a serverless AWS platform to automate the build and deployment of applications from GitHub repositories.
- Architected a decoupled, event-driven system using AWS SQS for asynchronous build queuing & S3 for artifact storage.
- Achieved sub-10-second API response times by instantly queuing build jobs, enabling a non-blocking user experience with real-time status tracking via DynamoDB.

Efficient Flight Itinerary Optimizer | Graph Algorithms, Data Structures

Aug 2024 – Nov 2024

- Developed a multi-criteria flight planner using BFS Dijkstra's for streamlined routes by connections, cost, and time.
- Modeled real-world constraints (20-min layovers) with a flight-as-node graph to achieve $O(m)$ $O(m \log m)$ efficiency.
- Orchestrated a scalable solution for 10k+ flights under a 100-flight/city constraint, achieving real-time route generation with <5ms latency.

High-Performance Task Scheduler for Trading Systems | System Design, Data Structures

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.

Achievements

• **Competitive Programming:** Achieved a 1400+ rating on Codeforces (Specialist) and 1750+ on LeetCode (Top 10%), solving over 1000 DSA problems.

• **AWS Certifications:** Earned AWS Academy Graduate badges for Cloud Foundations and Cloud Architecting.

Leadership and Extracurricular Activities

Google Summer of Code Club – VIT Bhopal

Jan 2025 – Present

Founding Member and Technical Lead

VIT Bhopal

- Spearheaded the establishment of the GSoc Club at VIT Bhopal, mentoring over 50 members in competitive programming, enhancing technical capabilities for future contributions.