

ABHISHEK KUMAR

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Abhishek kumar

Github

Leetcode

Education

Indian Institute of Information Technology, Allahabad <i>M.Tech in IT (Network Security)</i> — <i>CGPA: 8.49</i>	2024 – Present <i>Allahabad, India</i>
Dr. Ambedkar Institute of Technology for Handicapped <i>B.Tech in Computer Science and Engineering</i> — <i>CGPA: 7.85</i>	2020 – 2024 <i>Kanpur, India</i>
Gyan Kunj Senior Secondary Academy <i>Senior Secondary (XII)</i> — <i>Percentage: 94%</i>	2018 – 2020 <i>Ballia, U.P.</i>
Gyan Kunj Senior Secondary Academy <i>High School (X)</i> — <i>Percentage: 89%</i>	2016 – 2018 <i>Ballia, U.P.</i>

Work Experience

Teaching Assistant – OOPs in C++ *IIIT Lucknow*

- Assisted in teaching OOPs concepts like classes, objects, inheritance, polymorphism, and encapsulation using C++.
- Led lab sessions on C++ programming, constructors, destructors, operator overloading, and file handling.
- Designed assignments and mini-projects on inheritance hierarchies, virtual functions, and exception handling.

PROJECTS

IntelliVibe – AI-Powered Hiring Platform | [MERN](#), [Deepgram](#) **May 2025 – Jun 2025**

- Developed a full-stack AI-powered hiring platform that automates candidate screening and evaluation using MERN stack, Deepgram, and Google Gemini.
- Built a 3-stage AI pipeline: (1) resume screening engine that parses resumes and ranks candidates based on a 70% ATS skill match to job descriptions, (2) dynamic quiz generation and proctoring for skill validation, and (3) AI-driven video interview with real-time speech-to-text and question generation.
- Integrated WebSockets for real-time interaction, Deepgram for accurate transcription, and Gemini for generating adaptive, role-specific interview questions.
- Reduced manual screening by 75% and projected average time-to-hire from 14 to 5 days by optimizing the workflow and automating evaluations.

Live Docs | [Next.js](#), [Clerk](#), [Sentry](#), [Liveblocks](#) **Aug 2024 – Sep 2024**

- Built a real-time collaborative document editing platform using Next.js and Liveblocks, supporting simultaneous multi-user editing and threaded comments.
- Implemented role-based access control (RBAC) to manage user permissions across viewer, editor, and admin levels.
- Integrated Clerk for authentication, and Sentry for robust error monitoring, performance insights, and alerting during production.

Privacy-Preserving ML with HE and FL (Thesis) | **Jan 2025 – Present**

- Developed a secure federated MLP framework leveraging Paillier homomorphic encryption to preserve gradient privacy during model training.
- Engineered encrypted gradient aggregation and client-side decryption to ensure end-to-end data confidentiality in collaborative learning.
- Achieved 92% accuracy on MNIST with minimal performance degradation; conducted in-depth analysis of key size vs. training time trade-offs.

TECHNICAL SKILLS

Languages: C++, C, HTML, CSS, JavaScript, ReactJS

Frameworks: React, Express.js, Node.js, Django

Databases: MySQL, MongoDB

Developer Tools: Git, GitHub, Docker, Jupyter Notebook, VS Code, Google Colab

Operating Systems: Windows, Linux

Concepts & Coursework: Data Structures & Algorithms, Operating Systems, DBMS, OOP, Web Development, Cryptography

ACHIEVEMENTS

IIIT Allahabad

- Solved nearly 450+ DSA problems on platforms like LeetCode, GeeksForGeeks, and Codeforces.
- Qualified GATE 2024 in Computer Science and Information Technology.