

Dilip Kumar

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SKILLS

- **Languages:** C++, Python
- **Core Concepts:** DSA, Competitive Programming, OOPs, Full-Stack Development
- **Systems & OS:** Linux, Windows
- **Databases:** SQL, PostgreSQL
- **Networking & Security:** TCP/IP, Routing, Switching, VPN, Firewalls, TLS, Ethical Hacking
- **Platforms & Tools:** Git & GitHub, VS Code, AWS
- **Soft Skills:** Problem Solving, Team Collaboration, Adaptability

PROJECTS

Placement Preparation Portal: *Node.js, PostgreSQL, REST APIs, JWT, React* | [GitHub](#) | [Live Demo](#) Jun' 25

- Engineered a robust RESTful API handling authentication, problem management, and contest logic, secured with JWT (JSON Web Tokens) and crypt password hashing.
- Solved the "Duplicate Data" migration challenge by writing custom PowerShell and Node.js migration scripts to seamlessly transfer local development data to the production cloud database without data loss.
- Optimized SQL queries for the Leaderboard and Statistics endpoints to ensure low-latency responses even with growing submission datasets.
- Created a "Contest Simulation" system with automated timers and real-time score calculation, handling edge cases for late submissions and difficulty weighting.

Gemini-Powered Rubik's Cube Simulator: *JavaScript, Gemini API, HTML, CSS* | [GitHub](#) | [Live Demo](#) Oct' 25

- Integrated Google Gemini API to create a context-aware AI companion that provides real-time commentary, coaching tips based on move history, and algorithmic pattern generation.
- Implemented "Smart View-Aware" controls using 3D vector mathematics to map directional inputs to the cube's orientation relative to the camera, ensuring intuitive UX from any angle.
- Designed a responsive, futuristic UI using Tailwind CSS, utilizing glass morphism and CSS animations to ensure performance across desktop and mobile devices.

TRAINING

DSA Summer Bootcamp — CodeQuest: [Certificate](#) Jul' 25

Lovely Professional University

- Learned core DSA concepts using C++ including arrays, linked lists, stacks, queues, trees, graphs, heaps, sorting, searching, backtracking, recursion, and dynamic programming.
- Covered advanced topics such as graph algorithms, tries, and segment trees.
- Participated in hands-on coding sessions, real-world problem-solving, and mini competitive programming contests.

CERTIFICATE

- Ethical Hacking | NPTEL | [Link](#) Oct' 25
- Fundamentals of Network Communication | Coursera | Oct' 24
- Introduction to Hardware and Operating Systems | Coursera | [Link](#) Sep' 24

ACHIEVEMENTS

- Solved **1000+ DSA problems** across LeetCode, Codeforces, CodeChef and other platforms.
- CodeChef — 3★ Coder (1723) | [Link](#)
- Codeforces — Specialist (1475) | [Link](#)
- LeetCode Rating — Knight (1892) | [Link](#)

EDUCATION

Bachelor of Technology – Computer Science and Engineering

Lovely Professional University, Phagwara, Punjab CGPA: 6.5

12th Grade

Ms. College, Motihari, Bihar Percentage: 75%

10th Grade

Jnan Jyoti School, Ghorasahan, Bihar Percentage: 87%

Phagwara, Punjab

Aug'23 - Present

Motihari, Bihar

Mar'20 - Mar'22

Ghorasahan, Bihar

Jun'10 – Mar'20