LAKSHAY

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EDUCATION

Indian Institute of Information Technology, Manipur	Manipur, India
Bachelor of Technology in Computer Science and Engineering; CGPA: 7.43(upto sem 7)	*2022 – 2026*
D.A.V. Public School, Panipat	Panipat, India
*Class XII — **CBSE**; Percentage: 92.6%*	*2021*
D.A.V. Public School, Panipat	Panipat, India
*Class X — **CBSE**; Percentage: 92.8%*	*2019*

EXPERIENCE

Intern Developer — Remote
MBSGames — *May 2025 – July 2025*

- Developed core gameplay mechanics for 'Tiny Toads,' an educational mobile game, utilizing **Unity and C#** to enhance user engagement and learning outcomes.
- Engineered interactive learning modules (alphabet drawing, number counting) and optimized performance, resulting in a smoother user experience on low-end devices.

PROJECTS

High-Performance Trading Platform (CLI) | *C++, Boost.Beast, WebSocket, Deribit APIs* — Apr 2025

- Architected a low-latency HFT simulation engine in C++, capable of processing real-time market data via Deribit APIs with **sub-millisecond latency**.
- Implemented lock-free data structures and multithreaded request handling, increasing throughput by **40%** and ensuring fault tolerance under high load.

Course Directory — Live Demo — *MongoDB, Express.js, ejs, Node.js* — Jan 2025 – Feb 2025

- Built a responsive full-stack course management platform with RESTful APIs, supporting 500+ documents and role-based access for admins and professors.
- Applied MVC design pattern with clear separation of concerns, ensuring maintainable and scalable architecture.

Chat Application | *Node.js, Express.js, MongoDB, Socket.io* — Dec 2024 – Jan 2025

- Architected a real-time chat application, leveraging WebSockets for low-latency communication in a client-server model.
- Integrated **Redis caching** and pub/sub messaging, reducing database query load by **40%** and enabling seamless horizontal scaling.

Network Scheduling Algorithm Visualizer | *C++, Qt Framework* — Aug 2024 – Oct 2024

- Designed and implemented an interactive visualization tool for 5 network scheduling algorithms.
- Optimized rendering algorithms in **Qt**, achieving a **40% reduction in execution time** and supporting real-time visualization of complex scheduling logic.

TECHNICAL SKILLS

Languages: C/C++, Python, Java, JavaScript (ES6+), C#, Go
Frameworks & Libraries: React.js, Node.js, Express.js, Next.js, Bootstrap, Tailwind CSS, Redux
Databases: MongoDB, MySQL, PostgreSQL, SQL/NoSQL Design
Developer Tools: Git, GitHub, VS Code, npm, Postman, Linux/Unix, Agile/Scrum
Cloud & Deployment: Render, Docker (basic), AWS (basic)

RELEVANT COURSEWORK

Core CS: Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Computer Networks, Database Management Systems, Compiler Design
AI & ML: Artificial Intelligence, Machine Learning, Natural Language Processing, Information Retrieval
Systems & Security: Cloud Computing, Cyber Security, Cryptography, Internet of Things (IoT)

CERTIFICATIONS & LEADERSHIP

Web Development Bootcamp - Udemy (Mar 2024) — 65-hour full-stack development training.
Team Lead - Smart India Hackathon 2024 (Aug 2024) — Led 6-person development team using Agile/Scrum.
Problem Solving — Solved 500+ coding problems on HackerRank and LeetCode.
Ethical Hacking and Penetration Testing - C-DAC NOIDA (Dec 2024 – Jan 2025) — Completed online training & virtual internship under Cyber Gyan Project.