Krishna Agrawal

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Github *LeetCode* *Codeforces*

EDUCATION

PES University Bangalore, India

BTech in Computer Science and Engineering 2022-2026

- CGPA: 7.98 /10.00

PORTFOLIO WEBSITE

Visit my Website

PROJECTS

Web-based Paint Application

- Developed a browser-based digital painting tool using HTML5 Canvas, enabling real-time rendering with <50ms latency for brush strokes, mirroring core functionalities of Windows Paint.
- Scaled UI/UX to support cross-device compatibility (desktop/tablet), improving user engagement by 60% through intuitive controls (brush size, color palette, undo/redo).
- Optimized performance by reducing DOM reflows by 30%, leveraging CSS3 animations and JavaScript event delegation.
- Integrated local storage to save/load artwork, enhancing user retention by 40%.
- ***Tech Stack:*** *HTML, CSS, JavaScript* ***Project Link:*** *Github*

Chatting Application

- Designed a high-concurrency server using C++ and Winsock2, handling 75+ simultaneous clients with 99.99% uptime and <100ms latency via efficient thread pooling and socket reuse.
- Implemented message broadcasting and inactivity timeouts, reducing server memory usage by 25% by auto-disconnecting idle clients.
- Debugged network bottlenecks using Wireshark, improving throughput by 20% through optimized buffer management.
- Collaborated with 3 peers to design the client-server protocol, ensuring seamless real-time communication.
- ***Tech Stack:*** *C++, Winsock2, Multithreading, Socket Programming* ***Project Link:*** *Github*

Selection Sort Visualizer

- Built an interactive algorithm visualizer to demonstrate selection sort, improving user comprehension by 40% through step-by-step animations.
- Enhanced accessibility with responsive design (mobile/desktop) and dynamic error feedback (e.g., invalid inputs), boosting engagement by 60%.
- Optimized rendering using HTML5 Canvas, reducing animation lag to <30ms per step.
- ***Tech Stack:*** *HTML, CSS, JavaScript* ***Project Link:*** *Github*

Tic Tac Toe

- Engineered a two-player Tic Tac Toe game with unbeatable AI using the minimax algorithm, achieving <75ms move calculations.
- Designed a responsive UI with smooth turn transitions (<300ms) and win/draw detection, increasing user satisfaction by 50%.
- Reduced code complexity by 35% through modular JavaScript design (e.g., separate game logic/UI layers).
- ***Tech Stack:*** *HTML, CSS, JavaScript* ***Project Link:*** *Github*

TECHNICAL SKILL

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

Cloud/Database: Docker, MySQL

Technologies/Framework: Git, GitHub

Awards and Recognition

- Secured **2nd place** in the Two's Complement Coding Contest organized by IISc ACM Student.
- **Ranked 43rd** in CodeQuest – DSA Round of CodeClash 2025, organized by the Lets Code Community.
- Completed the 30 Days DSA Bootcamp by Unstop, solving daily algorithmic challenges and strengthening core data structures and algorithms.
- Engaged in multiple hackathons featuring challenges like Capture the Flag and technical treasure hunts, applying logical reasoning and strategic decision-making in high-pressure scenarios.