# Krishna Agrawal

krishna9078agrawal@gmail.com | +91 9078522307 | linkedin.com/in/krishnaagr/







**EDUCATION** 

**PES University** Bengaluru, India BTech in Computer Science and Engineering 2022-2026

CGPA: 7.98 /10.00

# PORTFOLIO WEBSITE

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## Experience

#### The Alcoding Club, PES University

Bengaluru, India 2022-Present

**Project Link:** Github

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Technical Team Member

- · Contributed to the development of competitive programming resources and coding challenges to enhance problemsolving skills of members.
- Mentored junior students in algorithms, data structures, and efficient coding practices
- Collaborated with the technical team to organize coding contests, hackathons, and workshops.

## **PROJECTS**

## **Web-based Paint Application**

- Developed a browser-based digital painting tool using HTML5 Canvas, enabling real-time rendering with <50ms</li> 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

### **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 autodisconnecting 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

#### 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.
- · Recognized as a National Semi-Finalist in the Flipkart GRID 7.0 competition.
- 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.