AARADHYA SHUKLA

Software Engineer | 22 Male

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ABOUT ME

Aspiring software engineer with a strong foundation in C++, Java, and Python, and hands-on experience in system design, network programming, and embedded device control. Passionate about scalable architectures and AI-driven applications. Built end-to-end solutions involving TCP communication and real-time streaming. Quick learner, team-oriented, and eager to contribute to your company.

EDUCATION

Indian Certificate of Secondary Education(ICSE) Class 10

Year of Completion: 2019
Score: 88.40%

Indian School Certificate (ISC) – Class 12

Year of Completion: 2021
Score: 81.25%

Dr. D.Y. Patil Institute of Technology, Pune – Savitribai Phule Pune University

Bachelor of Engineering (B.E.) in Robotics and Automation (2021 – 2025)

SKILLS

- Languages: C++, Java, Python
- Tools/Frameworks: React, Node.js, MySQL, Springboot
- Systems: Linux, Windows
- Concepts: Distributed Systems, TCP/IP, Multithreading, Object-Oriented Design, Network Programming
- AI/ML: TensorFlow (basic), OpenCV
- Game Development: Unity, Unreal engine, mobile game development(Android Studio)
- Web development: HTML,CSS

HOBBIES

- Competitive Programming – Regular practice on platforms like Codeforces and LeetCode
- Game Development – Building experimental games using Unreal Engine
- Chess – Strategic gameplay and tournaments participation
- Tech Exploration – Passion for learning emerging AI tools and system architectures
- Rubik's Cube

PROJECTS

Minesweeper – Terminal-based Java Game

Personal Project | Class 11

- Built a full-featured text-based Minesweeper in Java with recursive cell clearing and flagging mechanisms.
- Applied matrix manipulation and logic design for mine distribution and user interaction.

ESPWizard – Customizable Remote Control for ESP32 Devices

Final Year Project | Jan 2025 – May 2025

- Designed a React-based application to control multiple ESP32-powered devices with a dynamic, device-specific interface.
- Implemented TCP socket communication between the app and ESP32, enabling reliable, real-time control and data exchange.
- Added live image streaming support from the bot's camera for enhanced user feedback.
- Focused on low-latency, secure, and scalable design, allowing rapid switching between different device types.

Hand Gesture-Based Volume Control using OpenCV

Personal Project | Python, OpenCV | 2023

- Built a real-time hand gesture recognition system using OpenCV and MediaPipe to control system volume through hand distance.
- Tracked landmarks on fingers and computed distance between thumb and index finger to dynamically adjust system volume.
- Integrated with Windows audio API (pycaw) to map gesture input to audio output level changes.
- Applied techniques such as contour detection, hand landmark tracking, and Euclidean distance measurement.