

# Rishika Aggarwal

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## EDUCATION

**Pranveer Singh Institute of Technology**  
*B.Tech in Computer Science and Engineering*  
**Chhaya Public School**  
*Intermediate*

**2021 - 2025**

*CGPA: 8.6/10*

**2020 - 2021**

*Percentage: 89%*

## TECHNICAL SKILLS

**Programming Languages:** C++, Javascript

**Libraries and Tools:** React JS, Vs Code, Postman, OpenCV, TensorFlow, GitHub, Vercel, Visual Studio

**Frontend:** HTML, CSS, JavaScript, React

**Backend:** Node.js, Express.js, REST APIs, Real-Time Communication, WebSockets, Authentication

**Database:** Relational Databases (MySQL), Non-Relational Databases (MongoDB)

**ML Architectures:** CNN

## RELEVANT COURSEWORK

Data Structures and Algorithms (DSA), Object-Oriented Programming (OOP), Database Management Systems (DBMS)

## PROJECTS

### Real Time Chat Application [GitHub](#)

- Developed a real-time chat application using Socket.IO and React.js, reducing response time by **50%**.
- Integrated MongoDB to store and manage chat data, improving message persistence, with **99%** uptime for chat history retrieval.
- Implemented typing indicators and user-specific message updates, improving the user experience and engagement by **25%** during active conversations.

### Role-Based Access Control (RBAC) User Interface [Try It!](#)

- Engineered a dynamic user interface in React.js, leveraging Redux for state management, effectively handling permissions for **1,000+** active users with a **99%** accuracy in role-based operations.
- Integrated RESTful API architecture to enable seamless CRUD operations with **98%** reliability for user, role, and permission management.

### Brightness Control With Hand Detection [GitHub](#)

- Developed a Python-based application to control screen brightness, achieving a **25%** improvement in user interaction speed.
- Enhanced performance by reducing the time for brightness adjustment by **30%**, ensuring real-time responsiveness.
- Achieved a **35%** reduction in error occurrences by implementing robust error handling mechanisms across various hardware configurations.
- Streamlined the code, reducing application load time by **20%** through efficient algorithms and resource management, enhancing real-time functionality.

## ACHIEVEMENTS

- LeetCode: Accomplished **200+** algorithmic challenges on LeetCode, specializing in Dynamic Programming, String Manipulation, Array Manipulation, Stack, Heap, Tree Structures, Graphs, and many more.
- GeeksforGeeks: Completed **100+** problems on GeeksforGeeks, worked on my data structures and algorithms skills, leading to more efficient coding practices.
- HackerRank: Achieved **5 stars** rating in methodologies on HackerRank, demonstrating exceptional proficiency in tackling different problem sets.
- AWS APAC Solutions Architecture virtual experience program on Forage: Designed a simple and scalable hosting architecture based on Elastic Beanstalk for a client experiencing significant growth and slow response times.