Rishika Aggarwal

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EDUCATION

Pranveer Singh Institute of Technology **2021 - 2025**
B.Tech in Computer Science and Engineering *CGPA: 8.6/10*
Chhaya Public School **2020 - 2021**
Intermediate *Percentage: 89%*

TECHNICAL SKILLS

Programming Languages: C++, Javascript, Java
Libraries and Tools: React JS, Vs Code, Postman, OpenCV, TensorFlow, GitHub, Vercel, Visual Studio
Frontend: HTML,CSS,JavaScript, React
Backend: Node.js, REST APIs, Real-Time Communication, WebSockets
Database: Relational Databases (MySQL), Non-Relational Databases(MongoDB)
ML Architectures: CNN

RELEVANT COURSEWORK

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

PROJECTS

URL Shortener with QR Code and Dark Mode Try It!

- Integrated QR code generation, increasing mobile accessibility by 60%.
- Built a React.js and Firebase URL shortener, reducing URL length by 80% for improved shareability.
- Implemented dynamic dark mode toggle, improving user engagement by 35% and reducing eye strain for nighttime users.

Interactive Sorting Visualizer Try It!

- Interactive Sorting Visualizer: Engineered a web application that visualizes 5 sorting algorithms (Bubble, Selection, Insertion, Merge, Quick) using HTML, CSS, and JavaScript, allowing users to see real-time algorithm operations.
- Performance Optimization: Integrated customizable speed settings with an animation delay as low as 100 ms, ensuring smooth visualizations for arrays containing up to 100 elements.
- Real-Time Analytics: Implemented a statistics panel that tracked over 10,000 comparisons and 5,000 swaps during sorting processes, enabling precise algorithm performance analysis.

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 for a client experiencing significant growth and slow response times.