

# PRASHANT VERMA

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## PROFILE SUMMARY

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Software engineer specializing in web applications and distributed systems. Engineered a video conferencing platform with WebRTC and Socket.IO, implementing real-time communication features. Developed a scalable file transfer system using React and Spring Boot microservices. Proficient in full-stack development with React.js, Node.js, and Spring Boot. Currently pursuing computer science while exploring AI and cloud technologies.

## WORK EXPERIENCE

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- AICTE Eduskills Virtual Internship on AI-ML

Feb-Apr 2025

## PROJECT EXPERIENCE

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### Duplicate File Cleaner

- Developed a cross-platform file transfer application using Electron and JavaScript, enabling seamless file sharing across Windows, macOS, and Linux with support for files up to 10GB.
- Implemented background file synchronization and compression algorithms, achieving average transfer speeds of 100MB/s and reducing disk usage by 25% through efficient chunking.
- Built a modern desktop interface using React and Electron IPC, incorporating drag-and-drop functionality, transfer progress tracking, and system tray integration for improved user experience.

### Visual Algorithm Solver

- Created an interactive algorithm visualization tool using React and JavaScript that demonstrates common sorting algorithms through step-by-step animations and visual representations.
- Built dynamic sorting visualizations including bubble sort, quicksort, and merge sort with customizable array sizes and sorting speeds, enhancing algorithm comprehension for users.
- Designed a responsive UI with React components for real-time visualization controls, algorithm selection, and performance metrics tracking, leading to an engaging educational experience.

### File Transfer Manager

- Developed a secure file transfer system using Spring Boot and AWS S3, featuring end-to-end encryption, role-based access control, and support for files up to 5GB with resumable uploads.
- Implemented OAuth 2.0 authentication and JWT tokens for secure user management, enabling granular file permissions and maintaining audit logs for all file operations.
- Created automated test suites using JUnit and Mockito, achieving 90% code coverage, and integrated monitoring tools for real-time system health tracking and error logging.

## LANGUAGES AND SKILLS

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### Languages:

Java, Python; Web Technologies: HTML, CSS, JavaScript, TypeScript, React, React Native, NextJS, NodeJS, Spring, Spring Boot

### Skills:

Databases: MongoDB, MySQL; Version Control: Git and GitHub;

Other: Docker, Kubernetes, Linux; Data Structures and Algorithms (DSA)

## EDUCATION

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- Kalinga Institute of Industrial Technology, Bhubaneswar, Odisha  
Branch: CSE | CGPA: 8.3

## PUBLICATIONS

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- Verma, P., Alkhayyat, A., & Sharma, V. (2024). "[Effectiveness of Telemedicine in Disaster Relief Response Management](#)," 2024 International Conference on Electrical Electronics and Computing Technologies (ICEECT). IEEE. DOI: 10.1109/ICEECT61758.2024.10739251