PRASHANT VERMA

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PROFILE SUMMARY

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

- AICTE Eduskills Virtual Internship on AI-ML *Feb-Apr 2025*

PROJECT EXPERIENCE

Duplicate File Cleaner

- Developed a cross-platform duplicate file detection application using Electron and JavaScript, enabling seamless file cleaning across Windows, macOS, and Linux without any size limitation.
- Implemented background file synchronization and compression algorithms, achieving average transfer speeds of 300MB/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.

Evolution Simulator

- Developed an interactive evolution simulation platform using vanilla JavaScript, featuring customizable parameters like population size, mutation rates, and environmental pressures.
- Implemented real-time visualization of evolutionary processes using HTML5 Canvas, allowing users to observe natural selection and adaptation of digital organisms over multiple generations.
- Created an intuitive user interface for adjusting simulation variables, complete with statistical tracking and data visualization of population metrics and evolutionary trends.

LANGUAGES AND SKILLS

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

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

PUBLICATIONS

- 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