

MRIDUL SEHGAL

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SKILLS

- **Programming Languages** C/C++ , JavaScript , TypeScript , Python
- **Technical Skills** HTML , CSS , React.js , Next.js , Tailwind CSS , Node.js , Express.js , MongoDB
- **Tools and Technologies** Git , GitHub , VS Code , Figma
- **Relevant Course Work** Data Structures and Algorithms , Computer Networks , Operating Systems , Database Management Systems, Object Oriented Programming

WORK EXPERIENCE

Web Developer Intern

Ministry of Defence – WESEE, TANCS Department | New Delhi | January 2025 – Present

- Led the development of 6+ responsive front-end modules using React.js, Ant Design, HTML, and CSS, ensuring layout consistency across devices and contributing to a 40% improvement in accessibility metrics..
- Built interactive geospatial tools using Leaflet.js, including editable circular overlays and MMSI-based vessel highlighting, enhancing situational awareness and improving efficiency for 200+ internal users.
- Implemented 6 key security upgrades based on vulnerability assessments, such as input validation, file upload restrictions, CAPTCHA, request throttling and code obfuscation ,strengthening the application against common threats.
- Redesigned the Savior-net platform UI/UX, streamlining navigation and reducing friction, which led to a 50% faster task completion rate while preserving design consistency with Ant Design.

Frontend Web Developer Intern

elPixala (Powered by TiX Global Ventures) | Delhi | July 2024

- Coded responsive front-end interfaces for 3 client projects, developing 6+ pages and 9 reusable components with React.js, HTML, CSS, and JavaScript from detailed Figma designs; ensured consistent performance across various screen sizes.
- Integrated RESTful APIs to sync UI components with backend data, improving data accuracy and reducing frontend-backend latency by 30%.
- Refactored legacy code for scalability and maintainability, reducing redundancy and improving overall performance by 40%.

Frontend Web Developer Intern

Localitz Geofencing Innovations | Delhi | March 2024

- Engineered a prototype e-commerce front end by assembling six core pages (Login, Home, Contact, Product, Billing, Address) with HTML, CSS, and JavaScript; embedded an interactive map on the Address page to enrich user interaction..
- Converted Figma designs into responsive, pixel-accurate layouts compatible with desktops, tablets, and mobile devices.
- Delivered production-ready UI components with precise alignment to design specs, independently managing tasks and quickly adapting to new tools and workflows.

PROJECTS

ChatterBox : Real-Time Chat Application | [Visit](#)

Stack: MERN (MongoDB, Express.js, React.js, Node.js), Socket.IO, Tailwind CSS, MongoDB Atlas, Postman

- Architected a full-stack real-time chat platform supporting up to 15 simultaneous users, with secure login, registration, and logout features using JWT authentication, session control, password encryption, and single-device login enforcement.
- Enabled real-time, bi-directional messaging using Socket.IO, allowing instant delivery and live presence updates, emoji-based activity indicators, and smooth communication backed by RESTful APIs and a cloud-hosted MongoDB Atlas database.
- Crafted a responsive, interactive UI with React.js and Tailwind CSS, optimizing the UI to function flawlessly on both desktop and tablet screens.; tested 20+ backend endpoints via Postman to validate performance and API reliability.

The Sorting Visualizer | [GitHub Repository](#)

Stack: Next.js, Tailwind CSS , TypeScript

- Programmed a sorting simulator for five algorithms (Merge, Quick, Bubble, Insertion, Selection) handling 100+ visual bars per run.
- Included user controls for algorithm choice, bar quantity, and animation speed to help visualize sorting behavior.

EDUCATION

B.Tech (Electronics and communication Engineering with Computer Science Minor)	2021-2025	Bharati Vidyapeeth's College of Engineering, New Delhi.	8.85 CGPA (till 7 th Semester)
CBSE Class XII Board	2020	N.C. Jindal Public School, New Delhi	88.83 %

PATENTS

- Title of the Invention: Blockchain-Based Voting System as an Alternative to Electronic Voting Machines in India, under filling process.

FOREIGN LANGUAGE CERTIFICATION

- Japanese Language :- qualified NAT 5Q (equivalent to JLPT N5) April 2025 with a score of 133 / 180.