

Technology Stack

The technology stack used in the development of ResolveNow is based on the MERN stack—a powerful set of JavaScript-based technologies that enables full-stack development using a single language throughout the application. The choice of stack ensures fast development, maintainability, scalability, and performance.

Frontend (Client-side)

Layer	Technology	Description/Role in Project
Frontend	React.js	A popular JavaScript library used for building the user interface. React enables the creation of reusable UI components and provides fast rendering using a virtual DOM.
UI Styling	Bootstrap, Material UI	Used to create responsive and modern user interfaces. Bootstrap ensures grid-based layouts and mobile compatibility, while Material UI adds sleek, professional design elements.
API Client	Axios	A promise-based HTTP client used to send and receive data from the backend APIs. It helps the frontend communicate seamlessly with the Express.js server.
Backend	Node.js + Express.js	Node.js enables server-side JavaScript execution, while Express.js simplifies routing, middleware handling, and API creation. Together, they handle core server logic.
Database	MongoDB + Mongoose	A NoSQL database chosen for its flexibility and scalability. MongoDB stores data as JSON-like documents. Mongoose is used for schema design, validation, and queries.
Authentication	JWT (JSON Web Token)	Ensures secure user login and access control by assigning encrypted tokens after successful login. JWT is used for session persistence and role-based authorization.
Real-Time Features	Socket.io / WebRTC	These technologies enable live interactions like messaging and updates. Socket.io is ideal for user-