# Tech Stack for Connectify (Social Media App)

| Category | Technology | Description |
|---|---|---|
| Frontend | React | JavaScript library for building user interfaces with components. |
| | TypeScript | Superset of JavaScript that provides static types to improve development. |
| | Redux Toolkit | State management tool for managing app state in a predictable way. |
| | React Router | For handling navigation and routing between pages in a single-page application. |
| Backend | Spring Boot | Framework for building Java-based backend APIs, offering scalability and security. |
| | Java | Programming language for backend development (Spring Boot is based on Java). |
| Database | MySQL | Relational database management system for storing user data and application data. |
| | MongoDB | NoSQL database for storing chat messages and other unstructured data. |

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| Chat System | Node.js | JavaScript runtime for building real-time chat functionality with WebSockets. |
| | Socket.IO | Library for enabling real-time, bidirectional communication between web clients and servers (used for chat). |
| Authentication | JWT (JSON Web Tokens) | For stateless authentication and secure user login/authorization. |
| Cache | Redis | In-memory data structure store used as a cache to improve performance. |
| API Design | RESTful APIs | Design pattern for creating standardized, stateless APIs to communicate between frontend and backend. |
| Real-time Communication | WebSockets | Protocol for real-time communication between server and client (used for chat). |
| Testing | Jest / Mocha / Chai | Testing frameworks for unit, integration, and end-to-end tests. |
| Version Control | Git / GitHub | Version control system for managing code and collaboration. |