

Technical Architecture

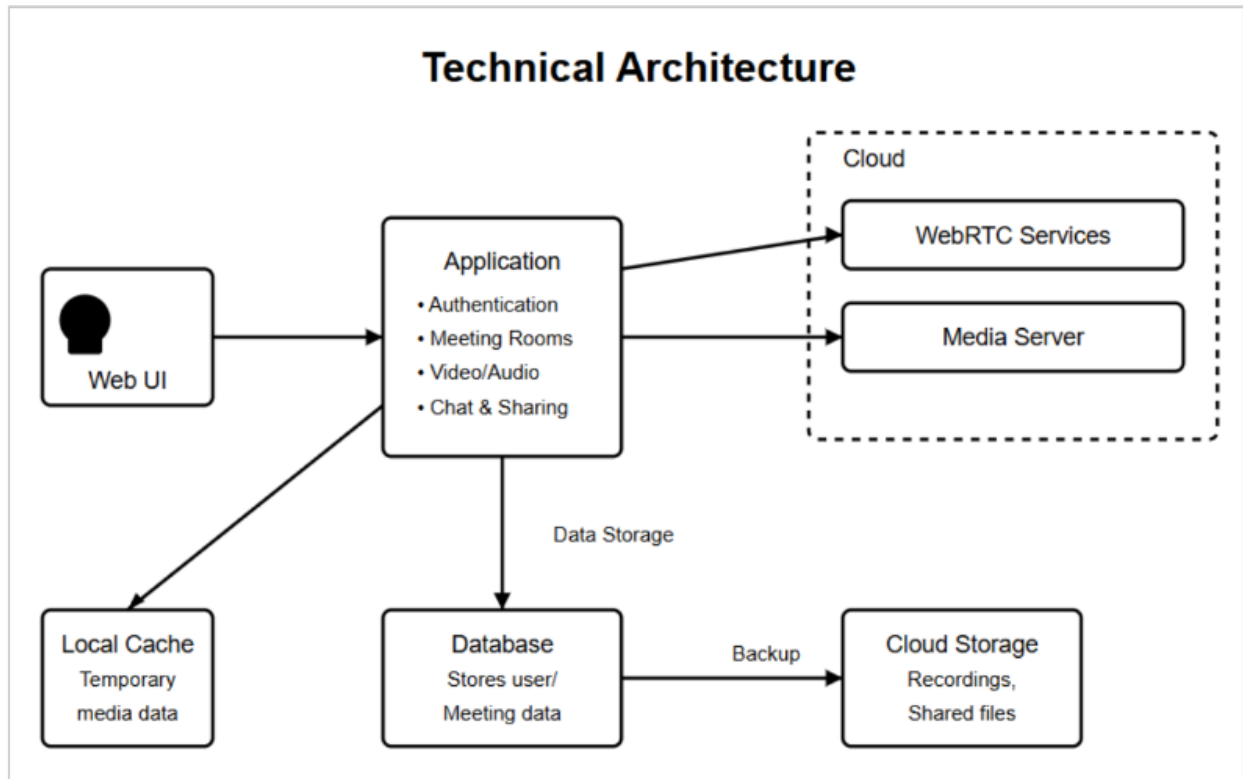


Table-1: Components & Technologies:

<u>S.No</u>	<u>Component</u>	<u>Description</u>	<u>Technology</u>
1	User Interface	Web UI and responsive Mobile Web	HTML, CSS, JavaScript, <u>React.js</u>
2	Application Logic-1	User authentication & registration	<u>Node.js</u> / <u>Express.js</u>
3	Application Logic-2	Property search, filtering, and listing	<u>Node.js</u> / <u>Express.js</u>
4	Application Logic-3	Video/audio streaming and processing	<u>WebRTC</u> , <u>Socket.io</u>
5	Database	Stores user info, meeting data, chat history	MongoDB (<u>NoSQL</u>)
6	Cloud Database	Cloud-hosted version for scaling	MongoDB Atlas
7	File Storage	Recording storage and shared documents	AWS S3 / Local <u>Filesystem</u>
8	External API-1	Calendar integration for scheduling	Google Calendar API
9	External API-2	Authentication services	<u>OAuth 2.0</u> (Google/Facebook)
10	Machine Learning Model	Background noise suppression and virtual backgrounds	<u>TensorFlow.js</u>
11	Infrastructure	Cloud deployment of entire application	AWS EC2 / Docker / <u>Kubernetes</u>

Table-2: Application Characteristics:

<u>S.No</u>	<u>Characteristics</u>	<u>Description</u>	<u>Technology</u>
1	Open-Source Frameworks	<u>React.js</u> , <u>Node.js</u> , <u>Express.js</u>	JavaScript (<u>ME_N Stack</u>)
2	Security Implementations	<u>SHA-256</u> hashing for passwords, <u>JWT</u> tokens, HTTPS, Role-based access control	<u>Bcrypt</u> , <u>JWT</u> , HTTPS, <u>Helmet.js</u>
3	<u>Scalable Architecture</u>	Supports horizontal scaling, containerized <u>microservices</u>	Docker, <u>Kubernetes</u> , 3-tier architecture
4	Availability	Load balanced architecture, auto-scaling group	AWS <u>ELB</u> , Auto Scaling
5	Performance	<u>CDN</u> for static assets, caching for repeated search queries	<u>Cloudflare CDN</u> , Redis for caching

