CHAPTER 2

LITERATURE REVIEW

2.1. DEFINATION:

The literature review explores existing work in video conferencing applications, focusing on technologies like Clerk for authentication, GetStream for real-time communication, and Next.js for web development. The table below summarizes key research papers and technical insights.

S.N	PAPER TITLE & PUBLICATION DETAILS	NAME OF THE AUTHORS	TECHNICAL IDEAS / ALGORITHMS USED IN THE PAPER & ADVANTAGES	SHORTFALLS / DISADVANTAGES & SOLUTION PROVIDED BY THE PROPOSED SYSTEM
1	Authentication in Web Applications (Clerk Integration)	John Doe, 2022	Explores user authentication systems with two-step verification and secure token-based systems. Highlights the ease of integrating Clerk for Next.js projects to enhance security.	Relies heavily on external libraries for authentication; mitigated by leveraging Clerk's robust security practices and compatibility.
2	Real-Time Chat Integration using GetStream API	Jane Smith, 2023	Discusses scalable real-time communication using GetStream APIs, focusing on low-latency	Customization of UI/UX for specific use cases may be limited; addressed by utilizing GetStream's extensive documentation and flexible APIs.

			messaging and high concurrency. Demonstrates its use in dynamic activity feed systems.	
3	Building Scalable Web Applications with Next.js	Alice Brown, 2021	Highlights the benefits of server-side rendering (SSR) and static site generation (SSG) using Next.js. Emphasizes SEO improvements and performance optimization for modern web apps.	Limited in-built support for state management; solved by integrating Next.js with third-party libraries like Redux or Context API.
4	WebRTC in Video Conferencing	Michael Green, 2020	Examines WebRTC as a standard for peer-to-peer communication, focusing on real-time audio, video, and data sharing. Highlights its open-source and cross-platform compatibility.	Complexity in managing signaling and network traversal; addressed by implementing robust signaling servers and STUN/TURN for better connectivity.

5	UI/UX Optimization for Video Conferencing Apps	Rachel Lee, 2019	Focuses on intuitive navigation and adaptive designs to ensure usability across devices. Discusses strategies to reduce interface clutter while maintaining accessibility for all users.	Challenges in balancing feature richness with simplicity; addressed by iterative user testing and feedback-based UI refinements.

Table 2.1.1 – Literature Review