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Streamify [An Live Streaming Platform with Real Time Chat using Sockets]

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Abstract: *This research explores the development of a next-generation live streaming platform designed to elevate the broadcasting experience for both content producers and audiences. Utilizing technologies such as Next.js, Tailwind CSS, and MySQL, the platform incorporates RTMP and WHIP protocols to deliver high-definition, low-latency video streams, making it well-suited for real-time interactive applications.*

The system supports seamless integration with widely-used tools like OBS Studio, enabling streamers to initiate sessions with ease. To ensure secure user interaction, the platform adopts a robust authentication framework, while WebSocket-based real-time chat fosters immediate and engaging viewer participation, enhanced with visually distinct color identifiers for each user.

Moderation features such as slow chat, followers-only communication, and real-time user blocking help maintain a safe and controlled environment. The user interface provides flexible layout options, including collapsible sidebars and a theatre mode, allowing viewers to customize their experience.

Discovery of live content is streamlined through an intelligent home interface showcasing trending streams and a sophisticated search function that aids in rapid navigation. A personalized sidebar offers features for following creators and viewing recommendations, enhancing community interaction.

Additionally, webhook-based synchronization keeps user data and stream statuses up to date across the platform. Performance is optimized using server-side rendering (SSR), which contributes to fast page loads and smooth operation.

In conclusion, this platform integrates modern development tools and interactive features to meet the dynamic requirements of today's streaming ecosystem, delivering a user-centric and performance-optimized experience.

Keywords: Authentication, Real-time Chat, WebSockets, Viewer Engagement, Content Discovery, Layout, Server-Side Rendering (SSR)

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