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Cloud-Based Video Calling System with Secure Recording

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Abstract: *Online video conferencing has transformed the way individual and organisations communicate, providing a real time platform designed to facilitate collaboration in remote environments. The Cloud-Based Video Calling System with Secure Recording is designed to deliver to a secure and efficient communication platform for personal and professional needs. Popular video calling platforms like Zoom and Google Meet enable recording under host control, which can create privacy concerns as participants or users cannot stop or deny the recording once it starts and also participants require to take permission from host to record a video. The system ensures end-to-end encryption for both communication and storage, protecting sensitive data from unauthorized access. By leveraging cloud-based infrastructure, the system offers scalability and controlled access to recorded data using role-based permissions. The system is particularly beneficial for sensitive use cases such as corporate meetings, legal discussions, online education, and telemedicine, where confidentiality and data security are essential. The system integrates cloud storage, encryption mechanisms, and role-based access control (RBAC) to safeguard sensitive data. This abstract explores the motivation, challenges, methodology, and outcomes of the proposed secure video conferencing system.*

Keywords: Video calling, Secure recording, Cloud-based system, End-to-end encryption, Role-based access

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