IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 6, Issue 1, January 2026
Impact Factor: 7.67

Guard Talk – A Secure Platform For Communication

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Abstract: *The modern digital era, secure communication has become a critical requirement due to the increasing number of cyber threats, data breaches, and privacy violations. Conventional messaging platforms often fail to provide adequate protection against unauthorized access, message interception, and data misuse. This research presents Guard Talk, a secure communication platform designed to ensure confidentiality, integrity, and authenticated interaction between users. The system is developed using Python and the Flet framework, integrating secure authentication mechanisms and encrypted message handling to protect sensitive user information.*

Guard Talk provides a real-time one-to-one messaging environment where only authorized users can access and exchange information. The platform incorporates user registration and login modules, secure session handling, and protected data storage. Emphasis is placed on building a lightweight, user-friendly system that balances strong security principles with practical usability. The modular architecture of the platform enables maintainability and future scalability, allowing additional features such as group communication, multimedia sharing, and advanced cryptographic protocols to be integrated without disrupting the core system.

Keywords: Secure Communication, Encrypted Messaging, Cyber Security, End-to-End Security, Python-Based Application, Real-Time Chat System, User Authentication, Data Privacy, Cryptography, Secure Messaging Platform, Information Security, Client–Server Architecture

DOI: 10.48175/IJARSCT-30786