

## **Future Directions**

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This research work is proposed to provide mobile device security and the data security based on the Mobile Device challenges. The main challenges such as user authentication, malware detection, secured outsourcing of data and retrieval are discussed in this research work.

The proposed framework is not attempted against any specific attack issues. Since time is the major problem in handling attacks, time is taken as a prime parameter to evaluate the performance of the proposed approaches. In near future this framework is tested against any specific attack and also better detection can be incorporated using the enhanced approaches like:

- Multimodal Biometric Authentication can be incorporated.

However, individual biometric techniques are not well suited to all the user scenarios. One way to increase the reliability of transparency, a multimodal biometric authentication system is recommended.

- Deployment in Private Cloud Environment.

As public cloud is proprietary, users like researchers and students could not customize it to the maximum extent according to their requirements. Hence, private cloud is a treat for academic researchers and students to the savvy cloud environment. Explore the algorithms used in a public cloud, and can use it as a real test bed for implementing their work.

The proposed methodology is an integrated, comprehensive approach to provide mobile device security and data security.