A THREE LAYER PRIVACY PRESERVING CLOUD STORAGE BASED ON COMPUTATIONAL INTELLIGENCE IN FOG COMPUTING

A Project Report submitted in partial fulfillment of the requirements

for the award of the degree of

MASTER OF TECHNOLOGY

in

COMPUTER SCIENCE & ENGINEERING

By

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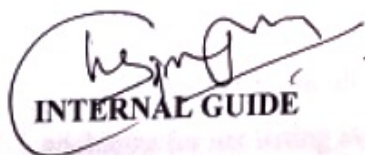### Ramakrishna colony, Karimnagar-505481

CERTIFICATE

This is to certify that the project report entitled "A THREE LAYER PRIVACY PRESERVING CLOUD STORAGE BASED ON COMPUTATIONAL INTELLIGENCE IN FOG COMPUTING" submitted by following student in partial fulfillment of the requirements for the award of the Degree of Master of Technology in CSE, and is a bonafide record of the work performed by her.
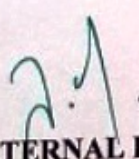
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The work embodied in this project report has not been submitted to any other institution for the award of any degree.

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ABSTRACT

The use of cloud computing has become more widespread in recent years. Although unstructured data is growing and receiving more attention, cloud storage technology is still in its infancy. On the other hand, user data is totally stored on cloud servers. In other words, consumers are exposed to privacy threats and lose control over their data. In-cloud server assaults are not effectively defended against by these technologies. To address this issue, we suggest a three-layer storage system based on fog computing. The provided structure enables maximum use of cloud storage while preserving data privacy. The Hash-Solomon algorithm is also designed to segment data. In order to protect privacy, just a small amount of data may be saved on a local machine and a fog server. Additionally, this method uses computational intelligence to determine the distribution fraction preserved in the cloud, fog, and local computer, respectively. Our method has been confirmed as a feasible alternative to the current cloud storage technique after a theoretical safety research and experimental assessment.

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10.CONCLUSION

With the continued growth of cloud computing, we will benefit greatly. Clients can easily increase their storage capacity by using a cloud storage service. However, there are a number of security issues with cloud storage. Customers who use cloud storage share ownership and management of the data with the cloud service provider. We have created a Hash-Solomon algorithm and TLS framework for cloud storage privacy based on the fog computing idea. The practicality of the plan has been confirmed by a theoretical safety analysis. We can ensure privacy on each server by distributing data blocks in the right proportion. On the other side, it is theoretically impossible to break the encoding matrix. It is possible to employ hash transformations to secure fragmented data. Both the encoding and decoding procedures were effective in the experiment investigating the effectiveness of cloud storage. In order to attain optimum efficiency, it is discovered that the Cauchy matrix is more effective throughout the coding process.

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