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### Major Project Report

On

# DUAL ACCESS CONTROL FOR CLOUD-BASED DATA STORAGE AND SHARING

Submitted to

Jawaharlal Nehru Technological University, Hyderabad

in partial fulfilment of the requirements for the award of Degree of

#### **Bachelor of Technology**

in

# Computer Science and Engineering

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# SUMATHI REDDY INSTITUTE OF TECHNOLOGY for WOMEN

(Approved by AICTE, New Delhi; Affiliated to JNTU, Hyderabad)

Ananthasagar(Vill), Hasanparthy(M), Warangal – 506 371(T.S.), Website: www.sritw.org

2022-2023



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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



# **CERTIFICATE**

This is to certify that the project entitled "DUAL ACCESS CONTROL FOR CLOUD-BASED DATA STORAGE AND SHARING" is submitted by L. Pravalika (196Y1A0558),

K. Swathi (196Y1A0550), E. Pranathi (196Y1A0531), B. Sowmya (196Y1A0514) in the partial fulfillment of requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering during academic year 2022-2023.

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## **ABSTRACT**

Cloud-based data storage service has drawn increasing interests from both academic and industry in the recent years due to its efficient and low cost management. Since it provides services in an open network, it is urgent for service providers to make use of secure data storage and sharing mechanism to ensure data confidentiality and service user privacy. To protect sensitive data from being compromised, the most widely used method is encryption. However, simply encrypting data (e.g., via AES) cannot fully address the practical need of data management. Besides, an effective access control over download request also needs to be considered so that Economic Denial of Sustainability (EDoS) attacks cannot be launched to hinder users from enjoying service. In this paper, we consider the dual access control, in the context of cloud-based storage, in the sense that we design a control mechanism over both data access and download request without loss of security and efficiency. Two dual access control systems are designed in this paper, where each of them is for a distinct designed setting. The security and experimental analysis for the systems are also presented.



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