VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI

A PROJECT REPORT ON

"SECRECY FOR MULTI-KEYWORD RANKED SEARCH OVER ENCRYPTED CLOUD DATA"

SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF DEGREE OF

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

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CERTIFICATE

This is to certify that the Project entitled "SECRECY FOR MULTI-KEYWORD RANKED SEARCH OVER ENCRYPTED CLOUD DATA" has been successfully completed by

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*the bonafide students of Department of Information Science & Engineering, Alva's Institute of Engineering and Technology in partial fulfillment for the award of BACHELOR OF ENGINEERING in **DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2015–2016. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.*

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ABSTRACT

With the advent of cloud computing, data owners are motivated to outsource their complex data management systems from local sites to the commercial public cloud for great flexibility and economic savings. More and more data owners centralize their sensitive data into the cloud. But for protecting data privacy, sensitive data have to be encrypted before outsourcing, which obsoletes traditional data utilization based on plaintext keyword search. Thus, enabling an encrypted cloud data search service is of paramount importance. Considering the large number of data users and documents in the cloud, it is necessary to allow multiple keywords in the search request and return documents in the order of their relevance to these keywords.

For the first time, the challenging problem of privacy-preserving multi-keyword ranked search over encrypted data in cloud computing (MRSE) is explored. It establishes a set of strict privacy requirements a secure cloud data utilization system. Among various multi-keyword semantics, choose the efficient similarity measure of "coordinate matching," i.e., as many matches as possible, to capture the relevance of data documents to the search query. Searchable encryption allows one to upload encrypted document on a remote honest-but-curious server and query that data at the server itself without requiring the documents to be decrypted prior to searching. Matched data items are returned in a ranked ordered manner. Thorough analysis investigating privacy and efficiency guarantees that proposed scheme indeed introduce low overhead on computation and communication.

As future work, the proposed scheme could be extended not only to the exact matching files but also the files including the terms latent semantically associated to the query keyword so that we can confront with more sophisticated search.