e-ISSN:2582-7219

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH IN SCIENCE, ENGINEERING AND TECHNOLOGY

Volume 7, Issue 7, July 2024

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

Impact Factor: 7.521

International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

| ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 7.521| Monthly, Peer Reviewed & Referred Journal|

| Volume 7, Issue 7, July 2024 |

| DOI:10.15680/IJMRSET.2024.0707108 |

Next-Gen Image Retrieval Leveraging Cloud Computing

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ABSTRACT: The rise of large digital content datasets has led to a reexamination of the core assumptions in portraiture retrievale methods. While these services provide notable benefits, they are often expensive due to the high demands for computing and storage resources. Shifting image retrieval to cloud servers can help reduce these costs, as the cloud offers extensive resources. However, this shift brings up privacy issues due to the potential inaccuracies of cloud servers. To address these concerns, the Manhattan distance between feature vectors can be used to approximate image distances. Experimental results show that the proposed scheme is effective in terms of search security and accuracy, highlighting the system's robust security features. using this technique we can easily getting the any encrypted portraiture from the server

KEYWORDS: Data storage and processing, Image search, Encryption, Secure search, Privacy.

I. INTRODUCTION

The surge in digital imagery and advancements in cloud computing have catalyzed the development of cloud-based image retrieval systems. These systems utilize cloud infrastructure to efficiently store, manage, and search vast image datasets. Leveraging cloud resources makes image retrieval scalable, costeffective, and enhances accessibility and performance over traditional local storage solutions. This paper examines the architecture, techniques, and advantages of cloud-based image retrieval, emphasizing its importance in handling extensive image collections.
The rapid expansion of digital portraiture and advancements in cloud technology have driven the expansion of systems that efficiently store, manage, and search vast image datasets. By leveraging cloud infrastructure, these systems offer scalable and cost-effective solutions, enhancing accessibility and performance compared to conventional local storage methods. 2 This paper explores the architecture, methodologies, and benefits of such cloud-based systems, emphasizing their crucial role in managing large-scale image collections.

II. LITERATURE SURVEY

1. Literature Survey

In [1],Yuan et al. used Cuckoo Hashing to safeguard image features and facilitate secure similarity searches. This method enabled the system to identify social connections between image owners by matching and retrieving similar images while maintaining data privacy and security.

In [2], Xia et al. proposed a privacy-preserving content-based image retrieval scheme that leverages Scale-Invariant Feature Transform (SIFT) features and Earth Mover's Distance (EMD). To ensure privacy, they applied a linear transformation to safeguard sensitive information during the EMD calculation, which is essentially a linear programming problem. This approach effectively protects privacy while performing accurate image retrieval based on the SIFT features.

In [3], Chen et al. introduced a retrieval scheme based on Markov processes applied to encrypted images. They ensured image content security by encrypting the Huffman table within JPEG files. To extract Markov features, they decoded the Discrete Cosine Transform (DCT) coefficients using the encrypted Huffman table. This method enabled effective retrieval of image content while maintaining robust encryption of sensitive data.

In [4], Zhang et al. introduced a secure outsourced content-based image retrieval (CBIR) scheme featuring fine-grained access control. They implemented a key-agent system designed to determine which images a user can access, thereby ensuring stringent security measures throughout the retrieval process.

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III. EXISTING SYSTEM

It is proof that using image-based data is an increasingly important feature of many applications that is used today such as diagnostics of patients' diseases and facial recognition. Furthermore, object recognition usually entails a larger storage need compared to other data that are mostly textual.

IV. PROPOSED SYSTEM

The six algorithms in the suggested scheme are owner Keygen, Imogene, Trappe, Idec, IndexGen and search which are performed by the owner of the picture and cloud server respectively. As a case study, we propose to encrypt image by color value substitution, block permutation, and intra-block pixel permutation. With the speciallydesigned encryption method, secure local histograms can be directly extracted from the encrypted images on cloud server side. The index construction can also be finished by cloud server. Compared with the scheme using secure global histogram our method achieves a much better retrieval accuracy

V. METHODOLOGY

The agile methodology can be characterized as a style of project management that presupposes dividing the large-scale projects into portions called "sprints"; As far as the future of the profession is concerned, the idea of bidirectional communication and proper cooperation has to reach a steady level if one aims to succeed in all the aspects. As soon as employees join their respective groups they enter a cycle that involves planning or designing, followed by the implementation phase, and then, evaluation or reflecting on the outcomes of the group assignments. The approach to the delivery of projects that is referred to as 'agile project management' directly underlines working together with the members of the projects and incremental instead of an anatomic progress. What makes the Scrum technique unique among the strategies and how does it differ from the other systems?

A very strong focus of the heuristic approach is originated from the knowledge that is received from previous experiences and the behaviour that is displayed when faced with the prevailing situation. Scrum is an heuristic approach which means its creation implied observation of types of strategies that were proven to be effective and those that were not. It accepts the possibility for the group to contain some gaps in its knowledge at the starting phase of a project; the more the group progresses towards the objective, the more extra information will be uncovered. The sought goal of Scrum is to deliver enhanced working conditions that enable the teams to rapidly adapt to the changes in various requirements and growing demands from the stakeholders.

The common practice in most of the working times is that the teams convene daily to share 4 experiences and difficulties that the team faced the previous day. The sprint was effective in creating a deliverable, however the future fruition of the deliverable will require the original product to be broken into chunks of a more manageable nature. Scrum is applied to the projects which have much requirements or which go through many changes frequently, for example, extending the product to the new market or creating the Internet technologies.

Members in a scrum team can only have only one task during sprint and this is to focus on delivery of a fixed quantity of work within a given time. Sprints are short sequential parts of a project that are at the core of both, Agile and Scrum frameworks. If the agile team is effective in the delivery of its goals and objectives within the projected sprints, then one should expect better quality products and less or no mistakes.

VI. CONCLUSION

This paper introduces a new approach to privacypreserving image retrieval, aimed at enhancing retrieval accuracy through a novel model. The method involves protecting image content by substituting color values, shuffling blocks, and rearranging pixels within blocks. Local features are defined using histograms, and the k-means algorithm is utilized to generate encrypted visual representations. These representations are depicted using an occurrence histogram. Image similarity is assessed directly on the cloud server, 5 allowing for efficient retrieval. Additionally, the construction of the index can be delegated to the cloud server, streamlining the process and reducing the computational burden on the user. In this project users can get portraiture by encrypted words and store the portraiture in the server safely and securely. The description of a image is also encrypted and stored in the cloud server, the unauthorized persons cannot accesses the portraitures

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REFERENCES

[1] X. Yuan et al., "Social Networking of the Photo-Oriented, Privacy-Aware Type in Distributed Systems" involves creating photosharing platforms that ensure user privacy within distributed systems, using advanced techniques to provide secure and controlled access," IEEE Transactions on Parallel and Distributed Systems, 2013.
[2] Z. Xia et al., Towards a Privacy-Preserving System: Maintaining Content-Based Image Retrieval in Cloud Computing" focuses on safeguarding user privacy while enabling efficient image retrieval. It employs advanced security techniques to protect image data during retrieval processe," IEEE Transactions on Cloud Computing, 2018.
[3] H. Cheng et al., "Markov Process-Based Retrieval for Encrypted JPEG Images" focuses on using Markov processes to enable efficient image retrieval from encrypted JPEG files," EURASIP Journal on Information Security, 2016.
[4] [4] L. Zhang, T. Jung, K. Liu, X. Y. Li, X. Ding, J. Gu, and Y. Liu, “Pic: Facilitating Large-Scale Privacy-Preserving Content-Based Image Search" focuses on ensuring secure and efficient image retrieval across extensive datasets on cloud,” IEEE Transactions on Parallel and Distributed Systems, Nov 2017

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