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# REVIEW on CONTENT BASED INFORMATION RETRIEVAL for DIGITAL LIBRARY USING TEXT DOCUMENT IMAGE

**Roshni S. Tadse<sup>1</sup>, Leena H. Patil<sup>2</sup>, Chandrapal U. Chauhan<sup>3</sup>**

<sup>1</sup>Research Scholar, Department of Computer Science and Engineering, Priyadarshini Institute of Engineering and Technology, Nagpur (MS), India

<sup>2</sup>Asst.Professor, Department of Computer Science and Engineering, Priyadarshini Institute of Engineering and Technology, Nagpur (MS), India

<sup>3</sup>Asst.Professor, Department of Computer Science and Engineering, Priyadarshini Institute of Engineering and Technology, Nagpur (MS), India

<sup>1</sup> [roshni.saanjh@gmail.com](mailto:roshni.saanjh@gmail.com); <sup>2</sup> [lhpatil10@gmail.com](mailto:lhpatil10@gmail.com); <sup>3</sup> [chanderpaul1@gmail.com](mailto:chanderpaul1@gmail.com)

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*Abstract— In The recent year, the uses of mobile devices has witnessed an emerging need to improve the user experience of digital library browsing and search, with various applications such as education, augmented reality, location search and product retrieval, searching and response time of delivery staying a challenging issues in mobile document search previously lots of work has been done on search engine, retrieve the document from the database without analyzing the image. They simply compare the query to the databases images; those are match that images are retrieve from the database, at the retrieving do not analyze the image. The proposed method, Information retrieval for image query automatically with a novel mobile document information retrieval framework, consisting of a FP-tree is proposed finding frequent pattern from the retrieve document to optimize the result, as well as a JPEG based query image compression.*

*Keywords— Digital library, FP-growth, Information Retrieval, JPEG, optimized output.*

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## I. INTRODUCTION

Digital library has played an important role in accessing the bulk of scanned documents stored in the digital image format. Many of the search engines deployed on the web retrieve images without analyzing content present in the image they match user queries against collocated textual information.

As this limits the applicability of search engines (images that do not coincide with textual data cannot be retrieved), therefore developing a methods that generate description words for a picture automatically. Although keyword-based indexing techniques are popular and the method of choice for image retrieval engines. A method that generates such descriptions automatically could therefore improve image retrieval by supporting

longer and more targeted queries, by creating as a short description of words for image's content, and by using the question-answer interfaces. The mobile devices has witnessed an emerging need to improve the user experience of digital library browsing and search, with various applications such as education, augmented reality, location search and product retrieval.

In the past decades, digital library has played an important role in accessing the corpus of massive scanned documents stored in the digital image format. Content based retrieval could be a promising solution to facilitate pervasive and efficient access of the document images. In a typical scenario, a query is formulated as a photo that captures the visual objects of user interest, for example, a book cover, a document page. The visual query is sent to the server end, where the visually similar documents are matched and returned. To improve the image matching efficiency, the extracted visual signatures of database images have to be indexed, typically by an inverted indexing table. Compared to typing query keywords, a snapped photo based query undoubtedly simplifies the input of a user query. Furthermore, in some specialized domains like searching ancient hieroglyph, content based queries retain as the effective approach. The recent proliferation of mobile devices has witnessed an emerging need to improve the user experience of digital library browsing and search, with various applications such as education, augmented reality, location search and product retrieval.

## II. LITERATURE REVIEW

[1] With the rapid multiplication use of mobile devices, previous years have find mobile searching techniques into digital library. Such a electronic device application's output has introduced the unique challenges in text document image search. The mobile photograph prefer hard to extract features from particular object's region of documents. In addition, searching and response time of query delivery bring out the challenging part in mobile document search. In this paper, In this paper propose a framework that is novel mobile document image retrieval framework, which is having the robust Local Inner-distance Shape Context (LISC) descriptor of line drawings, a Hamming distance KD-Tree for scalable, as well as a JBIG2 based query compression scheme with an OTSU based binarization, to reduce the response time of query delivery which maintaining query quality in terms of search performance.

Content based image retrieval (CBIR) [3] is the task of searching digital images from a huge database basis on the extraction of features, like as color, texture, shape of the image. Almost the research has been in CBIR which has been carried out with whole queries which were present in the database. This paper conclude the usefulness of CBIR techniques for retrieval of incomplete and misrepresented queries. There is two categories of the query: 1st is complete and 2nd is incomplete. The query image is considered to be misrepresented or incomplete image if it has some missing information, then some unwanted things, blurring, noise create due to image acquisition etc. Content based information retrieval were considered for searching the images from a huge database.

[4] Text mining with information extraction having a two techniques BWI and RAPIER boosted wrapper induction and Robust automated production of IE rules. In this paper having a framework for text mining where combining the information extraction and knowledge data discover for text mining. It proposed for IE enabling the application of KDD to unstructured text corpora. KDD can discover predictive rules for improving IE performance. It is critical to the development of effective text mining systems for computational

linguistics and machine learning. Open Language Learning for information extraction which extract relational tuples from text. Where OLLIE algorithm is implement to addresses the limitation of open information extraction and increase the precision.

### III. PROPOSED WORK



Fig 1: Right side shows the retrieved information from digital library  
Left side shows capturing the image by mobile device

In the proposed research plan of work shows that the visual query is captured by the user and sent to the server end, where the visually similar documents are matched and returned. Many of the search engines deployed on the web retrieve images without analyzing content present in the image; they match user queries against collocated textual information.

Firstly, it take a picture or capture the image through mobile which should be a text image. After that it goes into the choose mode onto the mobile. Here there has an option to take as an input wheather it is captured image or from stored image of the dataset . Hence, the choose mode will help to select the mode of the input image easily.

It will work under a two phases: Phase 1: captured Mode, where the document image is captured by user interest through the mobile. The user can easily send to the server end as a query of that captured image. Image as a document for sending a query to the server end.

Phase 2: Stored image Mode, Where the images is already stored at the user end, there is no need to captured the image for sending the query at the server end. User can easily select the document image and send it to server for retrieving the relevant information of that particular document

### IV. CONCLUSION

The proposed method infer that mobile document images are sending to the server and retrieved the document of that particular image. An efficient method of retrieving document images from content based

information retrieval and searching methods that search the information with respect to content of images. Also getting the optimized output at the user end in an efficient manner. JPEG compression is there, to low complexity is introduced to reduce the query delivery latency while maintaining comparable search accuracy.

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