Result Analysis on Memory Recall via Image Processing Intelligent using Social Contacts Based on Eigen Value Implementation

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Abstract: Human memory often fails. People are frequently beset with questions like "Who is that person? I think I met him in Tokyo last year." Existing memory aid tools cannot well support the recall of names effectively. This paper explores the memory recall enhancement issue from the perspective of memory cue extraction and associative search, and proposes a generic methodology to extract memory cues from heterogeneous, multimodal, physical/virtual data sources. Specifically, we use the contact name recall in the academic community as the target application to showcase our proposed methodology. We further develop an intelligent social contact manager that supports 1) auto collection of rich contact data from a combination of pervasive sensors and Web data sources, and 2) associative search of contacts when human memory fails. The system is validated by testing the performance of contact data collection techniques. An empirical user study on contact memory recall is also conducted, through which several findings about contact memorizing and recall are presented. Classic cognitive psychology theories are used to interpret these findings. Here we calculate the Eigen value and display result also by Eigen face detection

Keywords: Contact recall, memory aid, pervasive computing, social contact management, Web intelligence.

I. INTRODUCTION

Memory lapse is a common problem among people. Many different forms of memory lapses occur in our daily life. For e.g., we may forget the name of a contact person or the title of a document. These memory failures bring many inconveniences to our work and life.

Hence, finding effective ways to aid human memory becomes the fundamental and challenging problem. Enhancement to memory recall has been investigated in diverse areas for a long time. Before the time of computing, it was done manually.
Representative examples are always note taking and address-book writing. However, these methods suffer from problems, including possible loss or damage and inefficient search.

In today's life, people participate in various social activities and meet numerous people every day. These acquaintances form the social contact network (SCN) of a person. Thus, the ability to manage the SCN and use it to get things done has become a difficult task. For example, Bob is an active researcher. He participates in various academic activities and meets numerous new contacts.

To maintain his SCN efficiently, Bob uses a digital contact book for storing the information of his contacts. However, he encounters two issues. First, contact information retrieval can be difficult. Finding the needed information is not difficult using a traditional contact tool if we know the name of the target contact.

Just like most people, however, Bob often forgets. The names of his contacts. For example, while at the airport, Bob sees someone he has met before.

He wants to talk to that Person but cannot recall the information not even the person's name. The following is what he could only recall: "I met him at a conference in Tokyo in 2009. He told me that he graduated from MIT, with Web mining as his research interest." As an academic community member, Bob pays particular attention to some academic information of a contact, such as the contact's educational background and research interest. The contextual information relevant to the meeting event with the contact is also easy to remember. However, traditional contact tools do not work with such memory cues. Second, the cost of manually collecting the memory cues is quite high. Thus, it is better to develop a tool that can automatically collect the needed contact information

1.1 Objective

- To achieve the memory recall using the keyword search over social media data sources.
- To achieve the memory recall using the location recall over social media data sources.
- To implement face recognition over the data sources.
- To retrieval of post data associated with image using Eigen face matching values for efficient memory recall.

II. LITERATURE REVIEW

Enhancement to memory recall has been investigated in diverse areas for a long time. Before the era of computing, it was done manually. Representative examples are note taking and address-book writing. However, these methods suffer from problems, including possible loss/damage and inefficient search support. With the development of information technology, the use of digital tools (e.g., digital contact books, e-calendars) has gained much attention nowadays. However, while enabling reliable storage and efficient query support, these digital tools still face several issues.

2.1 Background
This chapter will give a brief description of some of the fundamental concepts and terminology relating to the Android OS, android OS architecture, what is android application, components of android application, and procedure of apk file creation in detailed.

2.1.1 Android Operating System
The Android OS is a Linux-based open source operating system for mobile devices. It was originally developed by Android Inc. and was bought by Google in 2005. The operating system is based on a modified version of the Linux 2.6 kernel [3] optimized for embedded systems and specially adapted for smartphones and tablets. The optimization process in embedded systems improves data processing and battery consumption, extending battery life.

Advantages of Android Platforms:
- Open Source Platform**,** Android developers can go to any level of creativity without any restrictions.
- Graphics support**,** Android offer high built in support for powerful 2D n 3D graphics. High quality graphics plays a vital role in development of applications
- Cost Effective**,** Android is the cost effective as an open source platform. The wide range of android application development tools are free to download.

2.2 Related Work
A literature survey is a discussion of the literature in each area of the study. It is concise overview of what has been studied, argued and established about a topic, and it is usually organized chronologically or thematically.
Tara Prasad Singhet.et al[10] describe the process of identification of a person by their facial image is the face recognition. For criminal identification, for passport verification. Face recognition approached for still image can be broadly categorized into holistic methods. This technique makes it possible to use the facial images of a person to authenticate him into a secure system. He entire raw face image as an input. Holistic methods use whereas extract local facial features and use their geometric and appearance properties feature based methods. How to build a simple yet a complete face recognition system using principal component Analysis, a holistic approach is

used. Linear projection to the original image space to achieve dimensionality reduction this method applies. By projective face images onto a feature space that spans the significant variations among known face images the system function. As Eigen faces do not necessarily correspond to feature such as ears, eyes and noses the significant features known. For the ability to learn and later recognize new faces in an unsupervised manner it provides. Found to be fast, relatively simple, and works well in a constrained environment this method.

III. PROPOSED WORK

3.1 Basic Idea
In this we proposed a system which help me to recall memory using key words came across while looking some, in proposed methodology we implementing an Eigen volume vector over the post, location, and event, i.e. check in and out images data over social media the Eigen vector is specially used to apply the processing concept
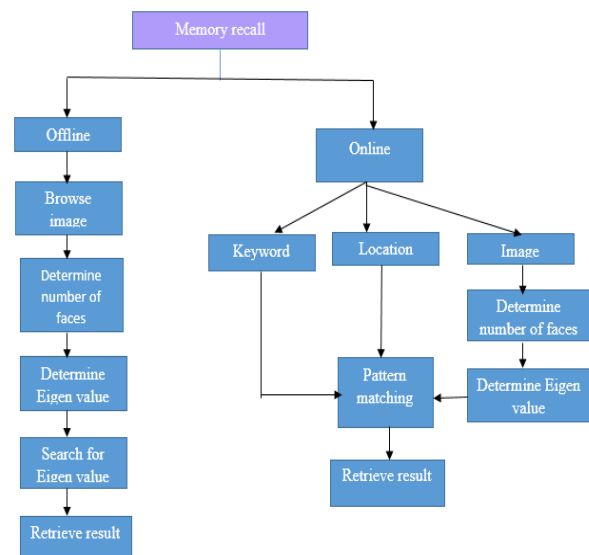
3.2 Data Flow Diagram

Fig 3.1 dataflow diagram

The above flow diagram show that the how memory recall work. The human can recall the memory no. of way through keywords, images, event, and also through the location. Hear we use,

1] Offline searching
2] Online searching

1]Offline searching**:**
Through the offline searching, firstly we needed image to browse, then image browse from the database. After browsing image, it calculates, how many no. of faces are available. After that it calculate the Eigen value then it searches for Eigen value match. This Eigen value is match with other Eigen value by pattern matching. When all this

process done, it retrieves the result. In offline searching, we need to select the image from your database. After selecting image, it displays, then we need to scan this image. After successful scanning, it displays image, which is available on social networking site's and it also display the post and friend tag's related to that image.

2} Online searching
In online searching we retrieve result by using;
1] Location, 2] Keyword, 3] Image.

• Location: In location searching method if we use Location then it applies the pattern matching and it shows the post in the form of result.
Eg. Using location Goa. Goa is the location then it applies the pattern matching which is already posted by person on social networking site. When matching is done, it retrieves all post related to location Goa in result.

• Keyword: In keyword searching method if we use keyword then it applies the pattern matching and it shows the post in the form of result.
Eg. Using keyword 2016 is the Keyword then it apply the pattern matching which is already posted by person on social networking sites. If matching is done it retrieve all post related to keyword 2016 in result.

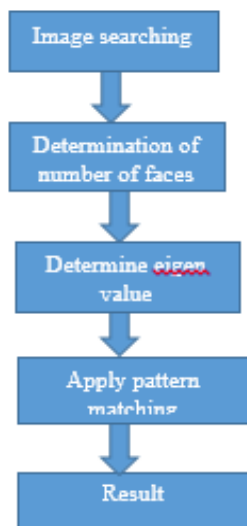• Image: In image searching method we have to go through 3 - 4 important steps it given below.

Fig 3.5 image searching

In image searching method first step is Determination of number of faces in this process take a picture from objective then it determine Eigen value after Determination of Eigen value pattern matching is apply on picture if the pattern matching successfully done. Then it show the result.
E.g. take a picture from mobile then, it shows the x no. of faces found. After searching pattern matching it shows the result. (Like hi! I'm riya)

IV. RESULT ANALYSIS

Existing systems will only search for the memory recall based on post data searching no one will used the image face recognition technique which has been uniquely applied for memory recall.

4.1 Available images and post data.

Photo id	Photo	Post	Time	Eigen value
1	NA	I am at Nagpur	11:43:29 pm	
2		I am at wadala with my frnd	11:37:56 pm	28.28125
3		I am happy with my mom	10:35:36 pm	24.125
4	NA	I am celebrating birthday with my frnd	09:43:07 pm	
5	NA	I am at amravati	11:57:51 pm	
6	NA	Hello I am at lib	12:21:19 am	
7		I am teacher	05:05:04 am	21.128
8		My lovely sister	02:46:58 am	21.4875
9		Always be happy	05:41:08 am	22.465
10	NA	Hello I am at lib	12:12:19 am	
11	NA	I am in Goa 2016	05:30:00 pm	
12	NA	I enjoy dinner at sukanta	07:45:15 pm	

By Applying Association Rule Mining Following are the data extracted from uploaded post which contain the substitute like location and then by implementing pattern matching algorithm it could possible for determine exact matching post
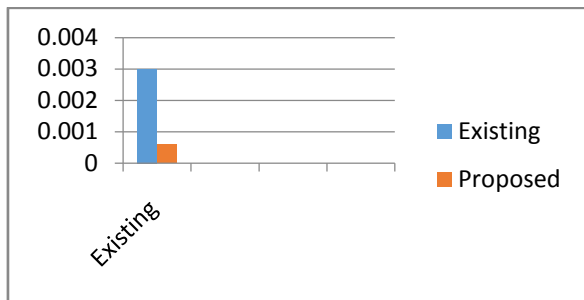
Post id	Location
10	Lib
2	Wadala

Record Scan by Existing and Proposed for Searching Location

Existing	Proposed
10	2

Suppose to scan the single record database engine will take time t=0.0003 ms on average then comparative time analysis by Existing and proposed

| Time Taken By Existing	Time Taken By Proposed
10*0.0003= 0.003	2*0.0003=0.0006

Graph 4.1: Time required by existing and proposed system.

For Eigen Face Value Determination There is no record scan in Existing work in existing the face detection has been implemented but no face recognition so that The recognition factor in existing system is always zero which is in proposed as shown below
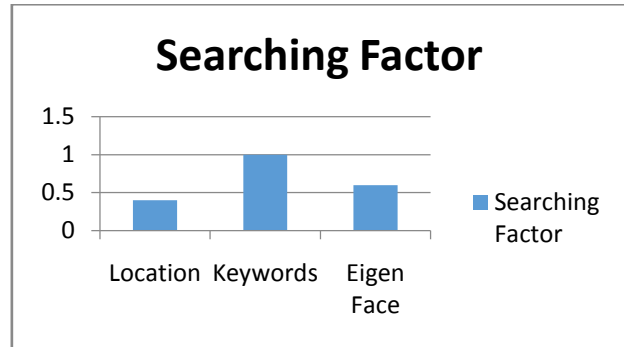
F(r) – Face recognition Factor
F(r) = Eigen Data Record/ Total Number of Records

F(r) for existing	F(r) for Proposed
0	5/10 = 0.5
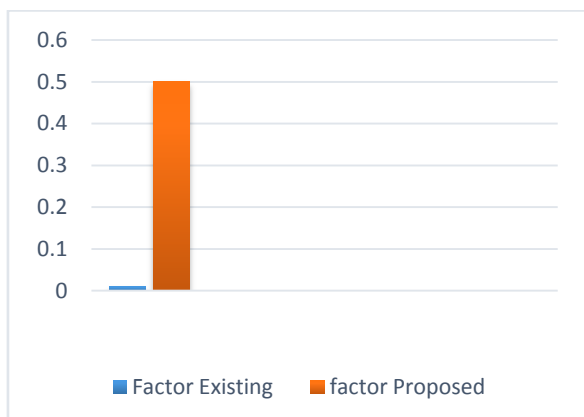
Graph 4.2 Effect of existing and proposed work

Graph 4.3 Searching factor

- For Location = Number of post containing location/ Total Number of Post= 2/5= 0.4
- For Keyword = it is always 1 because the for keyword we have to take all post as itemset
- For Eigen face = Number of post contain the eigen face / Total Number of Post = 3/5= 0.6

V. CONCLUSION AND FUTURE SCOPE

5.1 Conclusion
We are successfully implemented a memory recall based on some social media item set using image, location and keyword. The recall of image is achieved using Eigen face value determination technic so it is conclude that we can achieve the memory recall based on image post and location over social media.
Memory lapse is big problem in humans to reduce this problem and proposed the effective image processing in concerning with social media data source is big challenge. The vast processing within the millions of record, reducing the time estimation and increasing accuracy will provide the new functionality to recall for society. Develop a system which helps the people to recall through social contact network & image processing with Eigen face method of android. The proposed system will helps to reduce the time consumption for accessing the SCN.

5.2 Future Scope
 We can integrate the memory recall technique with other social media database like Gmail, twitter and linking using distributed database system

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