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A Survey on Mining Geo-tagged Images with Location Inference

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ABSTRACT: Generally we take images with cameras and mobile phones and these images provide some information like date and time but we cannot detect the exact place or location of the image where it is taken. In order to find the location where snapshot is taken, there are some devices with high end technology that supports geo-tagging. By using geo-tagged information it is possible to know exact location of the image where it is taken. Geo-tagging is the process in which we add geographical information of various media such as photograph or image. These images consist of latitude and longitude coordinates, place name, distance, time and some other information. Geo-tagging can help us to find out the specific image location using the latitude and longitude coordinates. Here this GPS coordinates are given to search engine to map the location. Geo-tagging mapping is used to retrieve the exact location of the snapshot.

KEYWORDS: Camera, Cities & Towns, Digital images, Global Positioning System [GPS], large scale system, Visualization, Geo-tagging.

I. INTRODUCTION

Geo-tagging is the process of adding geographical identification to photographs. In these project firstly we are going to store image in database. A fast-emerging trend in digital photography and community photo sharing is geo-tagging, the process of adding geographical identification metadata (data about data) such as image location. It can help users find a wide variety of location-specific information. Human beings, over the years, have constructed rich vocabularies to describe sceneries, objects, people, and places captured in pictures. Most such words instantly strike geographical associations in our minds. These geographical associations may vary from being rather specific (e.g., for Paris) to being fairly general (e.g., for beach). Geo-tagging allows users to visualize and manage photo collections in many new and interesting ways. Using a collection of over a million geo-tagged pictures, we build location probability maps for commonly used image tags over the entire globe. Easily can find out location, where your photo is taken. We will find the location by using some of the images only. Image tags contain information related to the location of an image capture. We show that effective geo-location is accomplished by examining the tags of an image.

II. RELATED WORK

The phenomenon of geotagging has generated a image of geo-awareness in multimedia. It can help users find a wide variety of location-specific information. For example, one can find images taken near a given location by latitude and longitude coordinates into a geotagging-enabled image search engine. Geotagging-enabled information services can also potentially be used to find location information. Once your image get stored in database it will find the location of place where you captured that image.

III. EXISTING SYSTEM

In the earliest system the problem was to identify the actual location of an image means they were not provide the accurate result of location only produced the predicted result.

Problems in the Existing System:

- 1) Geo-tagged Location inferring using Tag Names may not produce correct results

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- 2) The original image with tag name could not find the correct location

IV. PROPOSED SYSTEM

In this paper the user will provide the images for finding the location in the maps. The Geo-tagging phenomenon used here to tag the images in a particular location in the maps. The user will give some tag names to that images located in the maps

In the Proposed System the user images are used for finding the location. The input image is compared with all the geo-tagged images in the database.

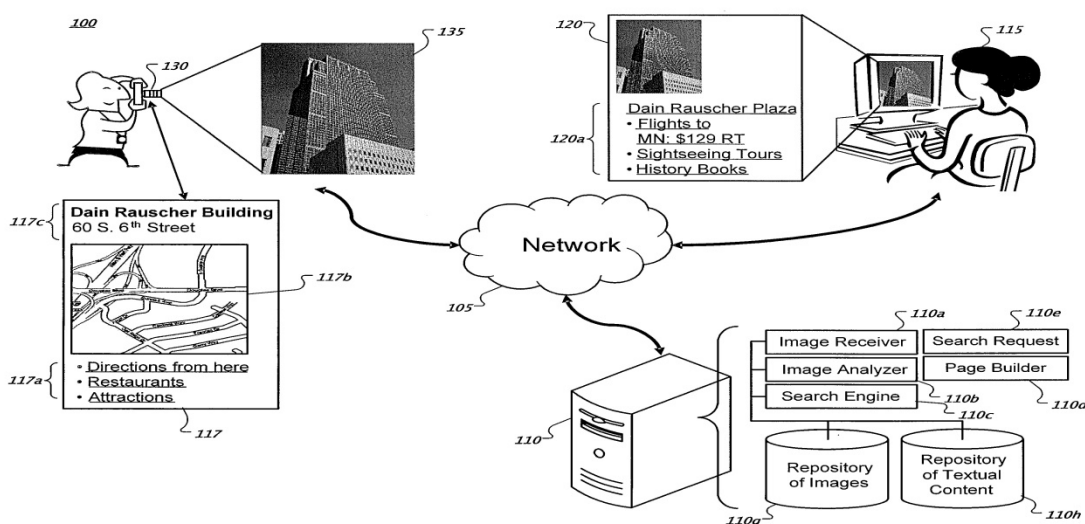


Fig 1. System Architecture

In Proposed System we are going to follow several methodology to get the longitude and latitude of image .Longitude and Latitude are main concerned point of proposed system. In present system input image is chosen by user and image will search in our proposed database .If image is not present in database system will alert message to user. If image is found in database ,with help of our proposed system image latitude and image longitude will calculated and accurate image location and map of that image location will provide to particular user. In Proposed system s some methodology we are going to use for finding location, such as a methodology based on simple K-nearest-neighbor visual search to infer geo-association of images was described. The basic premise explored in the aforementioned work was that visual content of pictures and their geographic locations are correlated. The strength of the system lay in a simple technique and the availability of a very large-scale image database (6 million images) for search.



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Flow of Proposed System:

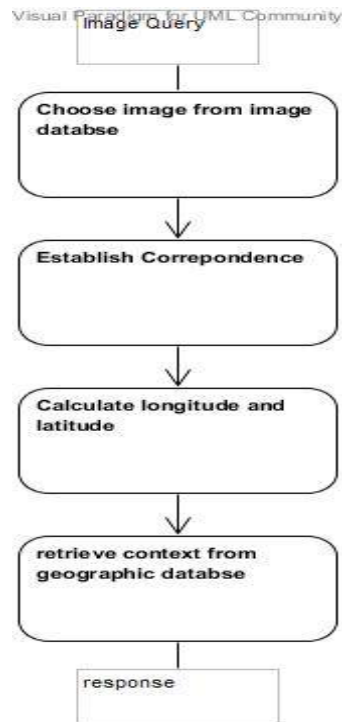


Fig. 2 Flowchart

V. CONCLUSION

In this work, Mining Geo-tagged Image with Location Inference system is proposed. We used algorithm K-nearest neighbor is used to determine the nearest location of query image. We show that accurate location is accomplished by examining the tags of an image. Further, in future the,location finding can be done with more and more images very effectively and visually. Using the proposed method a user can find out the geographical location of the captured scene or image. Depending on the contexts stored on the geographic database, the proposed method can be used to develop a wide range of applications. Our target applications are tightly related to outdoor location aware services including tourism and real estate .So that our system is very effective and efficient for detecting location of particular image.

REFERENCES

- [1] L. Wolf and S. Bileschi. "A critical view of context." *International Journal of Computer Vision*, 68(1):43-52, 2006.
- [2] J. Luo, M. Boutell, and C. Brown, "Pictures are not taken in a vacuum: An overview of exploiting context for semantic scene content understanding." *IEEE Signal Processing Magazine*, 23(2):101114, 2006.
- [3] M. Ames and M. Naaman. "Why we tag: Motivations for annotation in mobile and online media." In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 2007.
- [4] E. Amitay, N. Har'El, R. Sivan, and A. Soffer. "Web-awhere: Geotagging web content." In *Proceedings of the ACM SIGIR Conference on Research and Development in Information Retrieval*, 2004.
- [5] Y. Chen, X. Y. Chen, F. Y. Rao, X. L. Yu, Y. Li, and D. Liu, "LORE: An infrastructure to support location-aware services." *IBM J. Res. Dev.* 48(5/6):601-616, 2004.
- [6] M. Dubinko, R. Kumar, J. Magnani, J. Novak, P. Raghavan, and A. Tomkins. "Visualizing tags over time." In *Proceedings of the World Wide Web*, 2006.
- [7] A. Hinze and A. Voisard. "Location and time-based information delivery in tourism." *Advances in Spatial and Temporal Databases. Lecture Notes in Computer Science*, 2750:489-507, 2003
- [8] A. Jaffe, T. Tassa, and M. Davis, "Generating summaries and visualization for large collections of geo-referenced photographs." In *Proceedings of the ACM International Workshop on Multimedia Information Retrieval*, 2006.



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- [9] L. Kennedy, M. Naaman, S. Ahern, R. Nair, and T. Rattenbury, "How Flickr helps us make sense of the world: context and content in community-contributed media collections." In Proceedings of the ACM International Conference on Multimedia, 2007.
- [10] L. Liu, O. Wolfson, and H. Yin, "Extracting semantic location from outdoor positioning systems." In Proceedings of the IEEE International Conference on Mobile Data Management, 2006.
- [11] Yanai K, Yaegashi K " Detecting cultural differences using consumer-generated geotagged photos". In Proceedings of International Workshop on Location and the Web" ,(2009).
- [12] N. Jacobs, S. Satkin, N. Roman, R. Speyer, and R. Pless, Geolocating static cameras. *In Proceedings of International Conference on Computer Vision*, 2007.