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 ijircce@gmail.com

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Document Clustering for Forensic Analysis: An Approach for Improving Computer Inspection

Mr. Shinto Sebastian, Mr. P.Muthukumar

M.Sc Computer Science, Department of computer Science, Nilgiri college of Arts and Science, Thaloor, The Nilgiris,
Tamilnadu, India

Assistant Professor, Department of Computer Science, Nilgiri College of Arts and Science, Thaloor, The Nilgiris,
Tamilnadu, India

ABSTRACT: This project entitled “document clustering for forensic analysis: an approach for improving computer inspection” is the web application contains the crime document, there is the project useful for give the complaint to the corresponding police station. This project is useful for easy user interface the system utilizes the powerful database management data retrieval and data manipulation. By making use of a mobile application and a corresponding adequate information system, it is possible both to view the complaint status and its current stage of the case and it's also to be seen in a simple click on the final judgment.

KEYWORDS: Data Mining, Forensic Analysis, DBMS, Information System.

I. INTRODUCTION

In a more practical and realistic scenario, domain experts (e.g., forensic examiners) are scarce and have limited time available for performing examinations. Thus, it is reasonable to assume that, after finding a relevant document, the examiner could prioritize the analysis of other documents belonging to the cluster of interest, because it is likely that these are also relevant to the investigation. Such an approach, based on document clustering, can indeed improve the analysis of seized computers, as it will be discussed in more detail later.

This final module deals with the crime analysis. Only the Inspector and the Head is given the privilege to do crime analysis, because the administrator may or may not be from the police department. The crime *analyzer* analyzes the crime pattern using the history of crimes present in the database. The evidences and observations from the crime scene are collected and entered. The crime pattern analyzer then compares the entry with the crime history to trace out a similarity or a pattern in the crimes occurred. Using the pattern obtained it speeds up the investigation process for the detectives.

II. PROPOSED WORKS

In this context, automated methods of analysis are of great interest. In particular, algorithms for clustering documents can facilitate the discovery of new and useful knowledge from the documents under analysis. We present an approach that applies document clustering algorithms to forensic analysis of computers seized in police investigations. Clustering algorithms are typically used for exploratory data analysis, where there is little or no prior knowledge about the data. This is precisely the case in several applications of Computer Forensics, including the one addressed in our work. To formulate crime pattern detection as a machine learning task and to thereby use data mining to support police detectives in solving crimes. No such clustering system for crime detection. So, there may be difficult to find the history of data of the crimes. The detection of crimes takes much more time. Drawbacks are Time consuming process, Inconsistency in handling user and police department their complaint status, and Data handling may be very complicated if More Houses were contracted for the Contractor.

III. PROPOSED CLUSTERING FOR FORENSIC ANALYSIS

Modularization allows the designers to decompose a system into functional units to impose hierarchical ordering or functional usage, to implement data abstractions, and to develop independently useful subsystems. In addition, modularization can be used to isolate machine dependencies to improve the performance of software product, or to ease debugging, testing integration, tuning and modification of the system.

Admin is the overall supervisor for update the police cluster system accesses his accounts to control the entire website. Admin can add all the detail of the modification the site, police station, users, court staff, complaints, judgment details and admin also view the all data in the system. Users entering into the system and view the all details about the police station, judgment details also further the details of all the judgment, feedback and select police station to send to the complaint. Police station view all the complaints and check the given complaint is true or false. And the given complaint to take action manually also create the case FIR notes and send the case details to the court staff. Court staff view all the complaint and fix which day thus the case scheduling in the court and manually working the judgment. Finally, court staff sends the case final judgment to the user.

IV. PERFORMANCE EVALUATION

Processing time is the total time taken to complete the process of sending a packet from source to destination and it is otherwise called as execution time. Table 2 describes the processing time evaluation between DCFA (document clustering for forensic analysis), DUAL and DBF.

no of nodes	Processing Time (sec)		
	DCFA	DUAL	DBF
20	0.873	1.357	1.879
40	0.923	1.964	2.638
60	1.456	2.032	2.845
80	1.957	2.681	3.064
100	2.539	3.572	3.168

Table 1. Processing Time Evaluation

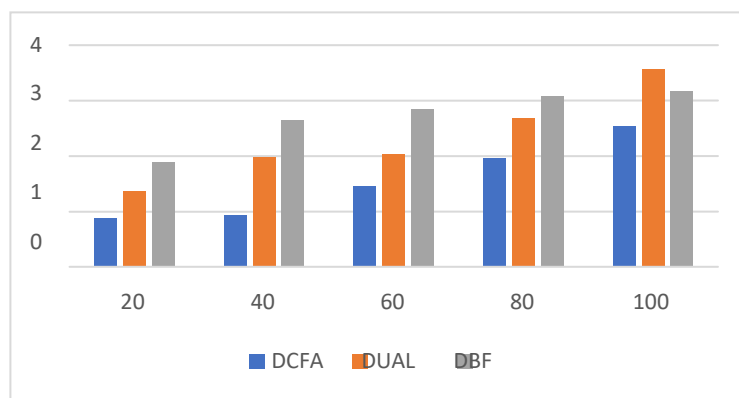


Figure 1. Graph for processing time

Packet Delivery Ratio (PDR) is the ration of packets received successfully to the destination. PDR depends upon the number packets send from source. Table 3 describes the PDR values obtained by proposed method and other existing methods. Figure 2 shows the graph view of PDR values

Numberof nodes	PDR (%)		
	DCFA	DUAL	DBF
20	98.35	89.68	84.54
40	96.24	87.47	83.9
60	93.14	83.03	88.81
80	92.41	82.61	76.24
100	90.75	80.21	72.12

Table 2. Packet Delivery Ratio

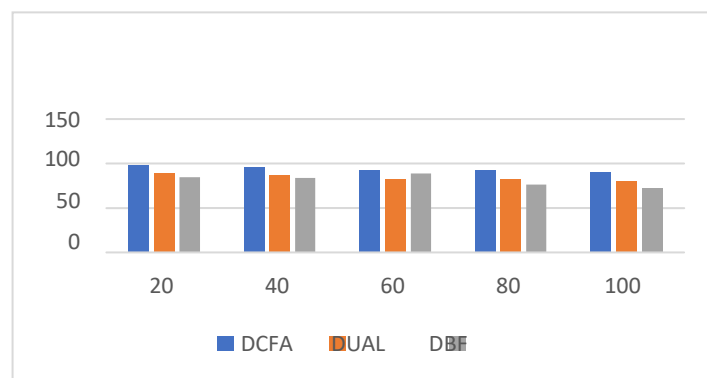


Figure 2. Graph for Packet Delivery Ratio (%)

Delay Delay is defined as the time taken for a data packet to reach the destination node. It is measured in milliseconds. In table 2 the time delay made by the proposed DPCIV, DUAL and DBF methods. Figure 4 shows the graph for delay happened during packet sending and receiving.

V. CONCLUSION AND FUTURE SCOPE

Any system, which has been in use for a number of years gradually, decays and become less effective because of the change in environment to which it has to be adapted. For a time being, it's possible to overcome problems by amendments and minor modification to acknowledge the need of fundamental changes. A consistent and efficient system has been successfully developed, implemented and tested. The system has been developed using J2EE and SQL under Windows 2000. The system is flexible and user friendly. So further changes can be incorporated into the system easily. Provides for maintenance and future enhancement.

REFERENCES

1. Anjum Asma and Gihan Nagib, 'Energy Efficient Routing Algorithms for Mobile Ad Hoc Networks—A Survey', International Journal of Emerging Trends & Technology in computer Science, Vol.3, Issue 1, pp. 218-223, 2012.
2. Hong-ryeol Gil1, Joon Yoo1 and Jong-won Lee2, 'An On-demand Energy-efficient Routing Algorithm for Wireless Ad hoc Networks', Proceedings of the 2nd International Conference on Human. Society and Internet HSI'03, pp. 302-311, 2003.
3. S.K. Dhurandher, S. Misra, M.S. Obaidat, V. Basal, P. Singh and V. Punia, 'An Energy-Efficient OnDemand Routing algorithm for Mobile Ad-Hoc Networks', 15th International conference on Electronics, Circuits and Systems, pp. 958-9618, 2008.
4. DilipKumar S. M. and Vijaya Kumar B. P. , 'Energy-Aware Multicast Routing in MANETs: A Genetic Algorithm Approach', International Journal of Computer Science and Information Security (IJCSIS), Vol. 2, 2009.
5. AlGabri Malek, Chunlin LI, Z. Yang, Naji Hasan.A.H and X.Zhang , 'Improved the Energy of Ad hoc On- Demand Distance Vector Routing Protocol', International Conference on Future Computer Supported Education, Published by Elsevier, IERI, pp. 355-361, 2012.



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