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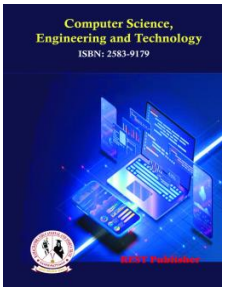

Analysis of Cloud Computing and Cloud Storage in Mobile Forensics Using the DEMATEL Method

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Abstract. *Cloud computing using hosts that are accessed online, data is maintained und managed using the storage arrangement for storing information. This means that instead of storing data on local storage devices like hard drives, Data is kept on servers that cloud vendors maintain. Cloud computing storage offers many benefits over traditional storage methods. Firstly, it provides easy and convenient access to access. This makes it an ideal storage solution for businesses and individuals who need to access data on the go. Secondly, cloud computing storage is highly scalable, allowing users to without worrying about running out of storage space. A variety of storing choices are often provided by cloud service companies to suit the needs of different users, from small businesses to large enterprises. Finally, cloud computing storage offers robust security features to protect data from unauthorized access, theft, and data loss. Cloud service providers employ advanced security protocols, encryption, and access controls to ensure data is kept safe and secure. Overall, cloud computing storage provides a flexible, scalable, and secure way to store and manage data in today's digital world. Cloud computing storage has significant implications for research, particularly in the areas of data management and collaboration. Here are some ways in which cloud storage is impacting research: Data management: Cloud storage enables researchers to store and manage large volumes of data, including structured and unstructured data, in a secure and accessible manner. This is particularly important in fields such as genomics, where researchers need to store and process massive amounts of data. Collaboration: Cloud storage makes it easier for researchers to collaborate and share data and resources with colleagues around the world. Cloud storage platforms can provide tools for sharing and collaboration, such as version control, commenting, and real-time collaboration. Accessibility: Cloud storage can help researchers to save money on data storage and management. Rather than investing in on-premise storage infrastructure, researchers can use cloud storage on a pay-as-you-go basis, which can be more cost-effective in the long run. Scalability: Cloud storage can scale up or down as needed, which is important for research projects with fluctuating data storage needs. This enables researchers to easily add or remove resources as needed, without having to worry about hardware limitations. Overall, cloud computing storage has significant implications for research. By enabling researchers to store and manage large volumes of data, collaborate with colleagues, access resources remotely, and save money on data storage, cloud storage is helping to accelerate research and advance scientific knowledge. DEMATEL (Decision Making Trial and Evaluation Laboratory) They are divided into analysis using the Nonmetal mineral product It is the interaction between the factors Visualized and assesses dependent relationships Through the structural model Also deals with identifying important. Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling. the Rank using the DEMATEL for Cloud Computing Storage in Cloud Computing is got the first rank whereas is the Digital Forensics is having the Lowest rank.*

Keywords: *MCDM, Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling.*

1. INTRODUCTION

A significant shift in how we store knowledge and run programmers has been brought about by cloud computing. Everything is hosted in the "cloud" rather than on a single desktop computer; the "cloud" is an ill-defined group of hardware and software that are able to accessed via the Internet. You can access all of your programmer and data using cloud computing from anywhere in the globe, which frees you from desktop restrictions and makes it simpler for team members in various places to work together. Cloud computing is the off-site relocation of services, computations, or data to an inside or outside, location-transparent, centralized facility by subcontractor for cost plus business gain. Data can be made more valuable by opening up options for improved available in the cloud, from where it can be viewed more conveniently and anytime, frequently for very little cost [1]. The paper offered several relevant methodologies on this topic. Cloud computing and online storage will bring about a difficulty in the selection of cloud services as well as a market for cloud resources.

cloud storage administration. Numerous IT experts, developers, marketers, the press, and analysts are interested in cloud computing, cloud services, or cloud storage, to mention a few variations. The study will examine major technologies, present a structure, and examine the needs for cloud storage [2]. A rising number of organisations are adopting and researching cloud computing to show proof of ideas and effective adoption. A lot of data is created, exchanged, and saved throughout the adoption and usage of cloud computing services from Consumers and consumers, as well as tests, simulations, pictures, and documents. In order to meet the rising needs for data processing, administration, and analysis, advanced approaches are required. The five characteristics of big data are amount, speed, variety, honesty, and value. Quantity refers to the amount of data that will be processed and analyzed [3].

Cloud computing is essential for accelerating the development of a contemporary economic system and is excellent for fostering the close cooperation of the Internet, big data, artificial intelligence, and the real economy. The Gartner, Inc. predicts that the market for public cloud services are projected to reach $266.4 billions of dollars in 2020 and $227.8 billions of dollars in 2019 respectively. Cloud computing and cloud storage both rely on virtualization infrastructure. Scaling, evaluation, and accessible interfaces. There are four layers to it, and they are as follows: 1) The storage layer, the fundamental component of cloud storage, is made up of devices that store data and has integrated storing management features [4]. applications for cloud computing. Users are in a position to assign a value to their data, but they are unable to evaluate the risk of data loss based on the management procedures and records of providers. The statistical and risk management techniques used by insurance providers are ideally suited for tracking the frequency of data loss events and evaluating management procedures. Customers will go to cloud storage services that more effective administration practises if a cloud storage provider did a poor job in avoiding data loss due to insurance costs to insure an identical data value over time. The best method to manage risks appears to be in this manner, but without ongoing consumer demand, no instruments will be developed for doing so. We think the systems communities can help inform consumers and offer well-structured recommendations [5]. A large-scale collaborative computing infrastructure that is powered by highly accessible, dynamically reconfigurable, and scalable resources is referred to as a cloud computing network. The phrase "cloud computing" has been described by the United States National Institute of Engineering and Standards (NIST) [1] as "self-service provided to a user upon command; access to an immense network." in which resource its flexibility and scalability are quick; provision of resource collaboration at the multi-tenant level; in addition to finally, the ability to manage, monitor, and determine the goods and services by means of an easily accessible system. In addition to on-demand services, the cloud additionally offers consumers a cost-effective environment, high levels of reliability, and vast scalability. The majority of businesses and industries are changing their IT structure or model to the cloud as an outcome of cloud computing's properties. The advantages of cloud computing, such as its capacity for distributed processing, are what have led to this significant shift [6]. In terms of end users, cloud computing will overtake desktop computing. According to a 2011 hosting survey, cloud computing is expanding because of cloud storage. Google Docs, too. The move to cloud storage has numerous important advantages, including the availability of data wherever and whenever it is needed, simple sharing and documenting with friends and family, and the elimination of the need for manually managing replication and data backups. 69% of all internet users had used a web-based software programmed or stored data online by 2008 [7]. The scenario of an attack on cloud infrastructure now includes cloud consumption. Threat actors exploit free and authorized cloud services during such an attack as opposed to employing dubious hosting providers that have been recognized by security companies. The advanced persistent threat known as LOWBALL, which utilized Dropbox as its control and commandeering infrastructure, is a current example. Due to the difficulties created by the nature of cloud infrastructure, cloud service firms (CSP) and clients of cloud services (CSU) may discover that "traditional" issue handling techniques are ineffective. Additionally, there may be differences in the incident handling demands and difficulties faced by CSU and CSPs (such as how to gather evidence and perform post-event investigations when appropriate) [8]. system for cloud computing. Data security is a significant issue that cloud storage technologies must quickly resolve.

Data leaks from cloud storage systems have increased in frequency during the past few years, as have malicious attacks on those systems. User data protection is the key to cloud storage security. The goal of this thesis is to secure cloud storage's data and create an appropriate cloud storage security strategy. Cloud storage technology is now necessary due to cloud computing's rising popularity as a network storage technology that is being developed and expanded using online computing concepts [9]. Cloud computing enables data owners to store their data in the public internet and relies on cloud servers to give users (data consumers) "24/7/365" access to data. Data security in the cloud can be effectively ensured by data access control. However, because of data outsourcing, the servers on the cloud cannot entirely be depended upon to supply the data authorization service, which means that the cloud storage systems no longer support the old server-based access control techniques. Traditional approaches often encrypt data so that only users with the right keys can decrypt it in order to achieve access control for data on untrusted servers. Despite the fact that these techniques can provide safe information control, keeping track of keys become more difficult when a system has a large number of users [10]. It is simple to predict that security for protecting information in the cloud will need to be strengthened as it grows more mature and offers more applications and storage facilities, using the analogy of e-banking. Data protection in the cloud will also need to become more sensitive and vital. In fact, we found that certain real-world applications, including whole disc encryption, have adopted the idea of two-factor encryption, another of the encrypting trends for data protection with the

Ubuntu operating system, AT&T smartphone two-factor encryption2, electronic vaulting, and Truva online information encryption3. These applications, however, are constrained in their applicability by the possibility of factor reversal. Keep in mind that we'll get to that eventually. In the age of cloud computing, a scalable and adaptable two-factor encryption approach is particularly desirable [11]. Architecture as a Service (LAAS) is a type of crucial form in cloud computing, and Fl Yi is deeply ingrained in our daily lives. Data access at any time and place it is possible, provisioning of resources on demand, a high level of hardware administration under the user's control, and other benefits make cloud storage superior to traditional storage. Some well-known IT businesses have begun to offer their cloud storage facilities as part of their online computing offerings in recent years, including Google Cloud Storage, Amazon J Simple Storage space 100 Service (S3), and Rackspace Cloud Files. In addition to services for applications, cloud storage also arose in infrastructure solutions [12]. Many applications in the field of cloud computing are based on data storage that only offer end-to-end consistency. Social networking, retail, entertainment, news, financial management, messaging, using crowdsourcing, mobility, and gaming are just a few of the apps that fall under this category. In these applications, the expense of accessing outdated data can take many different forms, including user annoyance, lost revenue, compensatory measures, repeated effort, etc. Applications gain if the system can deliver the most recent data while being aware of the performance constraints of the application. Even strongly consistsent applications can profit from SLAs that permit some laxer persistence [13]. "Cloud computing sounds so fantastic, safe, and sweet... If we refer to it as "swamp computing," we must be cognizant of the language. You might be in the correct state of mind, in my opinion. One of the main motivations behind the creation of the Urbannet was to enable people living in a single particular zone of time to take advantage of resources that aren't being used in various time zones, and you don't comprehend that the internet of things is remote computing [14]. The ecosystem for cloud computing has encountered numerous security difficulties. Before making the full changeover, organisations must be aware of the fact that the majority of them have been repaired to some extent and that other security features are developing. As a proactive security measure against intruders, a system that detects intrusions is crucial in cloud networks. Since IDS demands a virtualized technique for scalability, performance, and deployment, it must be effectively deployed on the cloud. S. Roschke et al. It is suggested that cloud computing users have restricted control over the information and assets stored on the remote server of the cloud service provider. Additionally, the performance of the majority of cloud-based apps is greatly impacted by the network connectivity between the provider of clouds and its clients [15]. Utilising the cloud. The market for cloud computing services is predicted to reach $148.8 billion by 2014, up from an estimated $68.3 billion in 2010 (Beil et al., 2010; Gartner, 2010). This prediction is made by IT market research firm Gartner. According to the types of resources offered, cloud computing services can be categorised into three groups: SaaS (Software with a Service), PaaS (Platform and a Service), and IaaS (which stands as a Service) (Wikipedia). Users can access virtual space using cloud storage services, a kind of IaaS. Users can save data like papers, photos, and audio files using cloud storage, which can be used for either personal or professional purposes [16]. Vast quantities of space are available for customer use from numerous cloud service providers (CSPs). Here, we'll concentrate on Google Drive, Microsoft SkyDrive, and Dropbox (www.dropbox.com, drive.google.com, and skydrive.live.com). A customer can typically receive a few gigabytes for free or 100 gigabytes for few bucks per month when they sign up for a cloud storage service. Users are able to get to their data through a variety of interfaces, including a web browser, a mobile application, or a regular software client [17]. A relatively new term, "cloud computing," refers to computing resources that are made accessible by machines as a service, whether inside within an organisation or externally via the Internet. This is the National Institute of Standards as well as Technology's definition of "cloud computing" The difficulty of collecting is increased by the fact that storage facilities in the cloud (like other networked cyber infrastructure) are vulnerable to abuse by criminals who employ cloud computing services for illegal activities. investigating the expanding body of digital evidence in active cases (Biggs and Vidalis, 2009). Cloud storage services are one example [18].

2. MATERIALS AND METHOD

Cloud Computing: In its most basic form, cloud computing is the transmission of computing services over the Internet (often referred to as "the cloud"), comprising servers, storage, networking, apps, analytics, and intelligence. Scale economics, flexible resource allocation, and speedy innovation are made possible as a result. Applications for cloud computing are increasingly widely used by both businesses and individuals. One sort of cloud service is streaming servers for video and audio, where real media files are stored remotely. Another choice would be cloud-based storage platforms like Dropbox, Google Drive, Onenote for Business, or Box.

Cloud Storage Forensics: Simply put, Digital forensics, which is concerned with gathering media from cloud environments, is combined with the reality of cloud computing to create cloud forensics. Investigators must interact with a variety of computer resources, including networks, devices for storage, programmers, virtual and real servers, and more. Because data in the cloud resides on hardware devices in different geographic locations, it can be difficult for forensic investigators to collect all affected devices for analysis. In fact, this is only possible in the case involving a private cloud environment.

Digital Forensics: A subset the branch of forensic science known as "digital forensics" is involved with locating, securing, processing, analyzing, and recording electronically stored data. Given that electronic evidence is used in practically all cases involving crime, computer forensic support is crucial to police investigations. Forensic computer analysts gather and

examine digital evidence and use it to support legal arguments or create tactics for preventing cybercrime. According to PayScale, forensic computer analysts typically earn roughly $73,900 per year. The BLS predicts that by 2029, employment in the field of forensic science will rise by 14%.

Mobile Forensics: Smartphone forensics is the procedure of removing digital records from handsets using legal methods. In contrast to traditional digital forensics methods, mobile forensics focuses largely on recovering information on handheld electronics which includes mobile devices Android-powered smartphones, and smartphones.

Incident Handling: Any company cybersecurity programme must start with incident response, and its significance cannot be emphasised. Quickly responding to security incidents with effectiveness and efficiency reduces damage, speeds up recovery, resumes corporate activities, and lowers expenses.

Method: The DEMATEL method addresses a specific issue, pinup binding. Work through problems with a hierarchical structure. Contribute to identifying workable solutions. Structural modeling techniques are used for one reason: interrelationships between organizational components. Dependency identification and context It can affect the basic concept of relationships. and chart direction due to the influence of elements. makes more use of graphs. DEMATEL Based on the basic principle of structure and its visualization, it processes problems by method, analyses them, and solves them. [19]. Modeling this structure, the approach adopts the form of a driven diagram, which is a causal effect for presenting values of influence between interrelated relations and analyzing factors. By analyzing the visual relationship of conditions between systemic factors, all components A causal group and an effect are divided into groups. It also provides researchers with structure between system components. A better understanding of the relationship and complexity is needed for troubleshooting computer problems. can find ways. The DEMATEL system is integrated. Management and emergency response work in tandem. In the manner proposed, it is not necessary to defuzzify obscure numbers before using the DEMATEL method [20]. As a result, it is unclear whether this method will accurately reflect the character. Finally, to get the final results from different aspects Twice in each integrated PPA, we use DEMATEL, which is ours. Decision Testing and Assessment Laboratory (DEMATEL) The DEMATEL method is a powerful method for gathering team knowledge to build a structured model and visualize the causal relationships among subsystems. But crisp values The ambiguity of the real world is an adequate reflection [21].

DEMATEL investigates the relationship between equity and a variety of investment factors and factors, as well as the ANP, which is used to assess their interdependence. Integrates. This section is, first and foremost, detailed. Establishes network relationships before increasing the weight of each ANP factor in comparison to Uses. Third, a systematic data collection process is provided [22]. The DEMATEL method quickly separates the complex set of factors into a sender organization and a receiving institution, and then translates that information into the appropriate strategy for selecting a management tool. Also, the ZOGP model enables businesses to fully utilise their limited funds for planning to develop ideal management systems by combining different configurations with Explicit Priorities [23]. DEMATEL methods. This impact and causality can be attributed to affected group barricades. Therefore, to effectively implement electronic waste management, barriers belonging to a causally Influential subgroup should be given special consideration. Decision-makers must therefore identify hurdles in order to reduce their impact or influence, guarantee that the legal is strong, and ensure that appropriate barriers are in place. Therefore, der methods ISM and DEMATEL methods, the results are somewhat consistent results grated ISM DEMATEL results for e-was determination constraints determine not only the structure of fire but also the structure of the interactions DEMATEL research, specific applications for DEMATEL [24]. as for which DEMATEL is only. categories: factors or only relationships between criteria The first type of clarification is: and causal Group barriers pro or Source for affected group barriers can be considered due. Therefore, in order to effectively implement electronic waste management, barriers belonging to a causal or an influential group should be considered on a priority basis. Therefore, decision makers need to determine obstacles the legal framework is strong make sure there is controllable in order to minimize impact or influence barriers. Therefore, derived the results combining ISM and DEMATEL techniques are somewhat congruent. The structure of the interactions between these barriers is determined by the integrated ISM DEMATEL results for e-waste management constraints [25].

3. RESULTS AND DISCUSSION

TABLE 1. Cloud Computing Storage

	Cloud Computing	Cloud Storage Forensics	Digital Forensics	Mobile Forensics	Incident Handling	Sum
Cloud Computing	0	2	4	2	3	11
Cloud Storage Forensics	4	0	2	1	2	9
Digital Forensics	2	1	0	3	1	7
Mobile Forensics	1	3	2	0	2	8
Incident Handling	2	4	1	3	0	10

Table 1 shows that DEMATEL Decision making trail and evaluation laboratory in Cloud Computing Storage with respect to Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling sum this value.

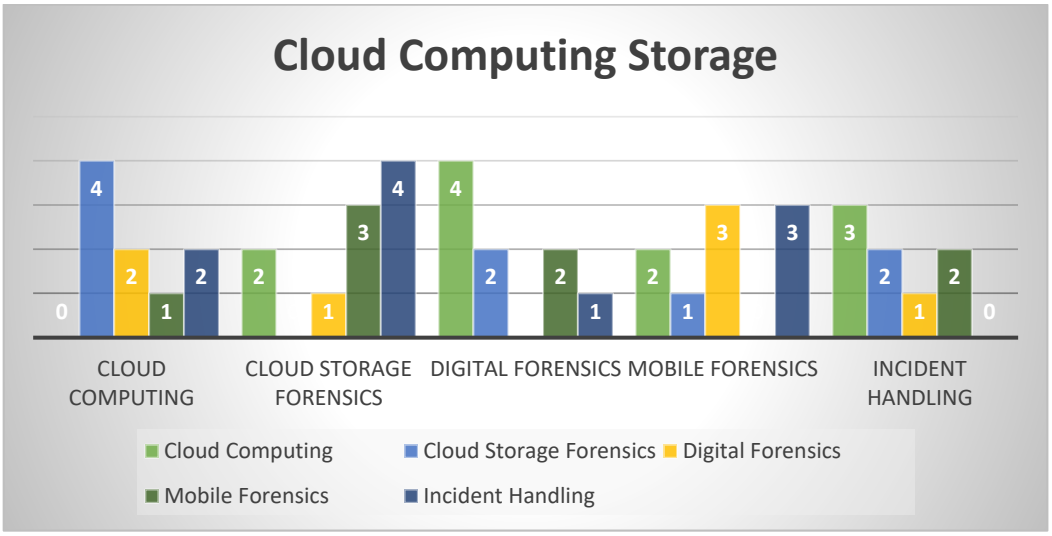

FIGURE 1. Cloud Computing Storage

Figure 1 shows that DEMATEL Decision making trail and evaluation laboratory in Cloud Computing Storage with respect to Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling sum this value.

TABLE 2. Normalizing of the direct relation matrix

	Cloud Computing	**Cloud Storage Forensics**	**Digital Forensics**	**Mobile Forensics**	**Incident Handling**
Cloud Computing	0	0.181818182	0.36363636	0.181818182	0.272727273
Cloud Storage Forensics	0.363636364	0	0.18181818	0.090909091	0.181818182
Digital Forensics	0.181818182	0.090909091	0	0.272727273	0.090909091
Mobile Forensics	0.090909091	0.272727273	0.18181818	0	0.181818182
Incident Handling	0.181818182	0.363636364	0.09090909	0.272727273	0

Table 2 shows that the Normalizing of the direct relation matrix in Cloud Computing Storage with respect to Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling the diagonal value of all the data set is zero.

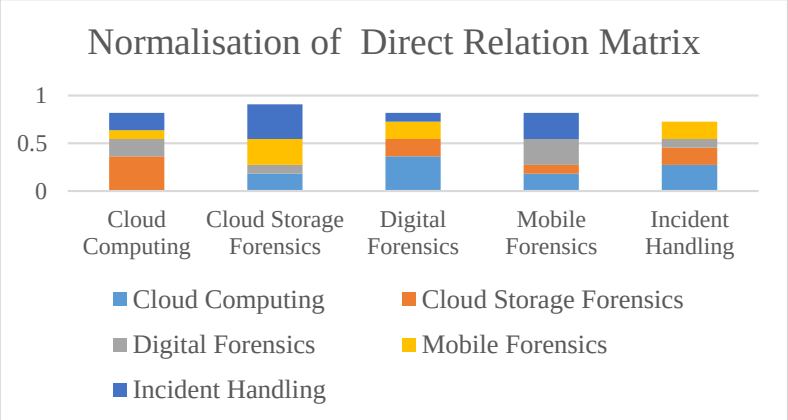

FIGURE 2. Normalization of direct relation matrix

Figure 2 Shows that chart for Normalizing of direct relation matrix Cloud Computing Storage in Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling has Different value.

TABLE 3. Calculate the Total Relation Matrix

	Cloud Computing	**Cloud Storage Forensics**	**Digital Forensics**	**Mobile Forensics**	**Incident Handling**
Cloud Computing	0	0.181818182	0.363636364	0.181818182	0.27272727
Cloud Storage Forensics	0.363636364	0	0.181818182	0.090909091	0.18181818
Digital Forensics	0.181818182	0.090909091	0	0.272727273	0.09090909
Mobile Forensics	0.090909091	0.272727273	0.181818182	0	0.18181818
Incident Handling	0.181818182	0.363636364	0.090909091	0.272727273	0

Table 3 Shows the Calculate the total relation matrix in Cloud Computing Storage of Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling is Calculate the Value.

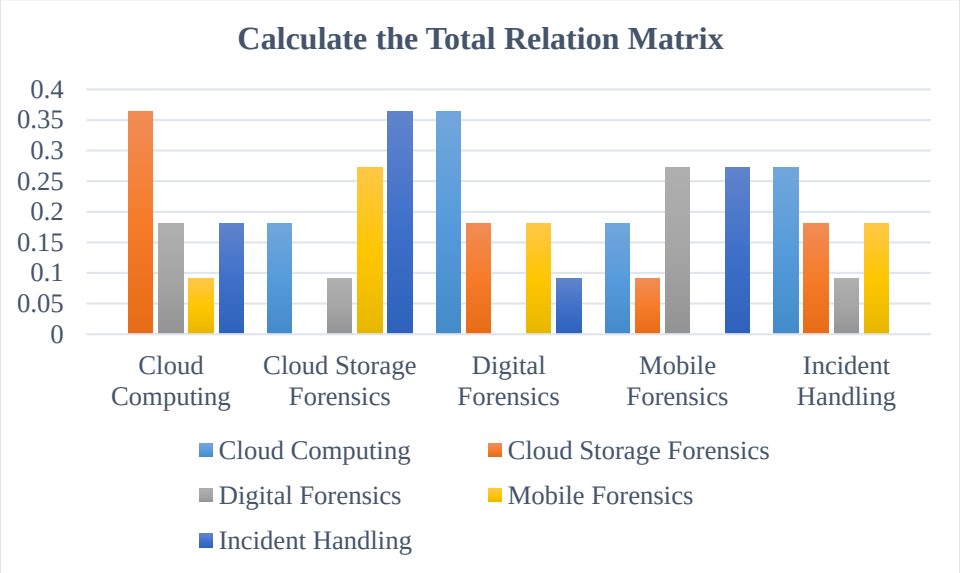

FIGURE 3. Calculate the Total Relation Matrix

Figure 3 Shows the Calculate the total relation matrix in Cloud Computing Storage of Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling is Calculate the Value.

TABLE 4. I= Identity matrix

I				
1	0	0	0	0
0	1	0	0	0
0	0	1	0	0
0	0	0	1	0
0	0	0	0	1

Table 4 Shows the T= Y(I-Y)-1, I= Identity matrix in Cloud Computing Storage of Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling is the common Value.

TABLE 5. Y Value

Y				
0	0.181818	0.363636	0.181818	0.272727
0.363636	0	0.181818	0.090909	0.181818
0.181818	0.090909	0	0.272727	0.090909
0.090909	0.272727	0.181818	0	0.181818
0.181818	0.363636	0.090909	0.272727	0

Table 5 Shows the Y Value in Cloud Computing Storage of Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling is Calculate the total relation matrix Value and Y Value is the same value.

TABLE 6. I-Y Value

I-Y				
1	-0.18182	-0.36364	-0.18182	-0.27273
-0.36364	1	-0.18182	-0.09091	-0.18182
-0.18182	-0.09091	1	-0.27273	-0.09091
-0.09091	-0.27273	-0.18182	1	-0.18182
-0.18182	-0.36364	-0.09091	-0.27273	1

Table 6 Shows the I-Y Value in Cloud Computing Storage of Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling table 4 T= Y(I-Y)-1, I= Identity matrix and table 5 Y Value Subtraction Value.

TABLE 7. (I-Y)-1 Value

(I-Y)-1				
1.890832	1.100689	1.168345	1.038156	1.010775
1.081081	1.837838	0.963964	0.864865	0.873874
0.749868	0.735559	1.612259	0.81558	0.633104
0.788553	0.952305	0.832538	1.666137	0.766826
1.020138	1.195019	0.936584	1.031797	1.768239

Table 7 shows the (I-Y)-1Value in Cloud Computing Storage of Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling Table 6 shows the Minvers shows used.

TABLE 8. Total Relation matrix (T)

	Total Relation matrix (T)					Ri
	0.890832	1.100689	1.168345	1.038156	1.010775	**5.208797**
	1.081081	0.837838	0.963964	0.864865	0.873874	**4.621622**
	0.749868	0.735559	0.612259	0.81558	0.633104	**3.54637**
	0.788553	0.952305	0.832538	0.666137	0.766826	**4.006359**
	1.020138	1.195019	0.936584	1.031797	0.768239	**4.951775**
Ci	**4.530472**	**4.82141**	**4.51369**	**4.416534**	**4.052818**	

Table 8 shows the Total Relation Matrix (T) the direct relation matrix is multiplied by the inverse of the value that the direct relation matrix is subtracted from the identity matrix.

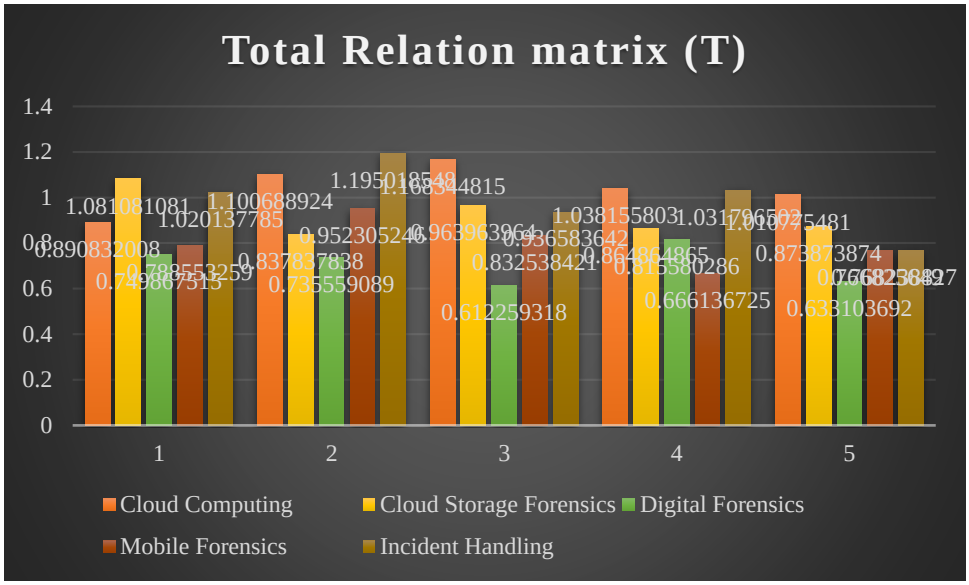

FIGURE 4. Total Relation matrix (T)

Figure 4 shows the Total Relation Matrix (T) the direct relation matrix is multiplied with the inverse of the value that the direct relation matrix is subtracted from the identity matrix.

TABLE 9. Cloud Computing Storage Ri & Ci Value

	Ri	Ci
Cloud Computing	5.208797	4.530472
Cloud Storage Forensics	4.621622	4.82141
Digital Forensics	3.54637	4.51369
Mobile Forensics	4.006359	4.416534
Incident Handling	4.951775	4.052818

Table 9 shows the Cloud Computing Storage Ri, Ci Value Cloud Computing Storage of Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling in Cloud Computing Storage in Cloud Computing is showing the Highest Value for Ri and Digital Forensics is showing the lowest value. Cloud Computing Storage in Cloud Storage Forensics is showing the Highest Value for Ci and Incident Handling is showing the lowest value.

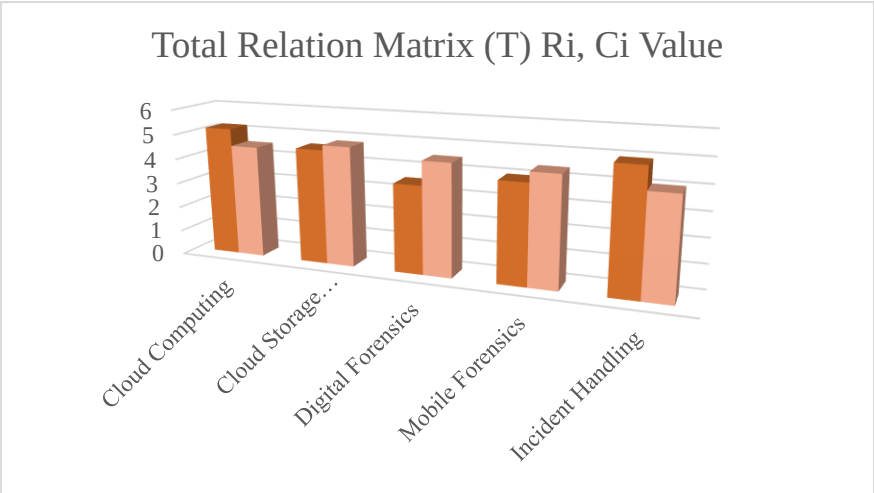

FIGURE 5. Total Relation Matrix (T) Ri, Ci Value

Figure 5 shows the Cloud Computing Storage Ri, Ci Value Cloud Computing Storage of Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling in Cloud Computing Storage in Cloud Computing is

showing the Highest Value for Ri and Digital Forensics is showing the lowest value. Cloud Computing Storage in Cloud Storage Forensics is showing the Highest Value for Ci and Incident Handling is showing the lowest value.

TABLE 10. Calculation of Ri+Ci and Ri-Ci to Get the Cause and Effect

	Ri+Ci	Ri-Ci	Rank	Identity
Cloud Computing	9.739269	0.678325	1	cause
Cloud Storage Forensics	9.443031	-0.19979	2	effect
Digital Forensics	8.06006	-0.96732	5	effect
Mobile Forensics	8.422893	-0.41017	4	effect
Incident Handling	9.004593	0.898958	3	cause

Table 10 shows the Calculation of Ri+Ci and Ri-Ci to Get the Cause and Effect. Cloud Computing Storage, Cloud Computing, Cloud Storage Forensics, Digital Forensics, Mobile Forensics and Incident Handling of Cloud Computing and Incident Handling is Showing the highest Value of cause. Cloud Computing Storage in Cloud Storage Forensics, Digital Forensics and Mobile Forensics is showing the lowest Value of effect.

TABLE 11. T matrix value

T matrix				
0.890832	**1.100689**	**1.168345**	**1.038156**	**1.010775**
1.081081	0.837838	**0.963964**	0.864865	0.873874
0.749868	0.735559	0.612259	0.81558	0.633104
0.788553	**0.952305**	0.832538	0.666137	0.766826
1.020138	**1.195019**	**0.936584**	**1.031797**	0.768239

Table 11 Shows the T matrix calculate the average of the matrix and its threshold value (alpha) Alpha 0.893396926. If the T matrix value is greater than threshold value then bold it

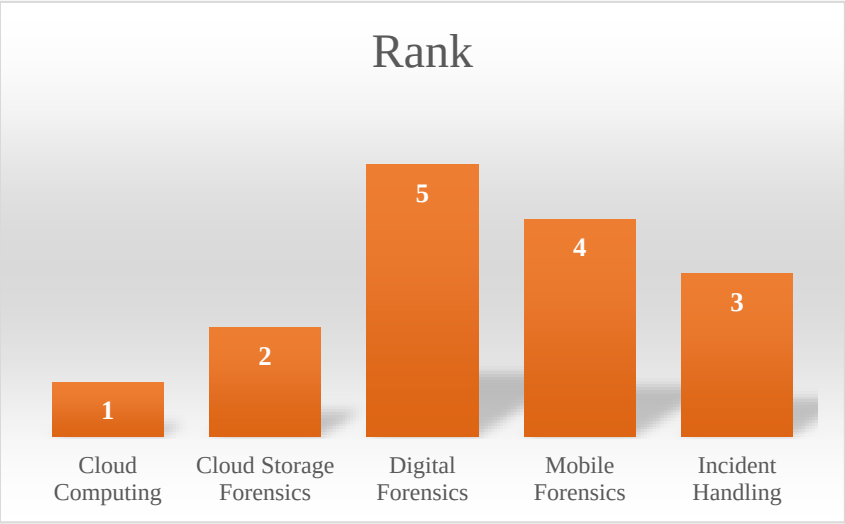

FIGURE 6. Shown the Rank

Figure 6 shows the Rank using the DEMATEL for Cloud Computing Storage in Cloud Computing is got the first rank whereas is the Digital Forensics is having the Lowest rank.

4. CONCLUSION

Cloud computing using hosts that are accessed online, data is maintained und managed using the storage arrangement for storing information. This means that instead of storing data on local storage devices like hard drives, Data is kept on servers that cloud vendors maintain. Cloud computing storage offers many benefits over traditional storage methods. Firstly, it provides easy and convenient access to access. This makes it an ideal storage solution for businesses and individuals who need to access data on the go. Secondly, cloud computing storage is highly scalable, allowing users to without worrying

about running out of storage space. A variety of storing choices are often provided by cloud service companies to suit the needs of different users, from small businesses to large enterprises. A significant shift in how we store knowledge and run programmes has been brought about by cloud computing. Everything is hosted in the "cloud" rather than on a single desktop computer; the "cloud" is an ill-defined group of hardware and software that are able to accessed via the Internet. You can access all of your programmes and data using cloud computing from anywhere in the globe, which frees you from desktop restrictions and makes it simpler for team members in various places to work together. Simply put, Digital forensics, which is concerned with gathering media from cloud environments, is combined with the reality of cloud computing to create cloud forensics. Investigators must interact with a variety of computer resources, including networks, devices for storage, programmers, virtual and real servers, and more. Because data in the cloud resides on hardware devices in different geographic locations, it can be difficult for forensic investigators to collect all affected devices for analysis. In fact, this is only possible in the case involving a private cloud environment. A subset the branch of forensic science known as "digital forensics" is involved with locating, securing, processing, analyzing, and recording electronically stored data. Given that electronic evidence is used in practically all cases involving crime, computer forensic support is crucial to police investigations. Forensic computer analysts gather and examine digital evidence and use it to support legal arguments or create tactics for preventing cybercrime. According to PayScale, forensic computer analysts typically earn roughly $73,900 per year. The BLS predicts that by 2029, employment in the field of forensic science will rise by 14%. Smartphone forensics is the procedure of removing digital records from handsets using legal methods. In contrast to traditional digital forensics methods, mobile forensics focuses largely on recovering information on handheld electronics which includes mobile devices Android-powered smartphones, and smartphones. Any company cybersecurity programme must start with incident response, and its significance cannot be emphasised. Quickly responding to security incidents with effectiveness and efficiency reduces damage, speeds up recovery, resumes corporate activities, and lowers expenses. the Rank using the DEMATEL for Cloud Computing Storage in Cloud Computing is got the first rank whereas is the Digital Forensics is having the Lowest rank.

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