Social Media: On the farther side of an Enigma

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Abstract— In the 21st century, which is often referred to as "digital Age" or "technological era", social media has dethroned its primary purpose of connecting people. It progressed to be an enigma with pervasiveness that is palpable in every realm. It is actively employed for marketing, gathering trends, writing blogs, retailing, education and more. The omnipresence and ever-changing nature of social media has had a consistent influence throughout the last decade.

This article peers into the assets and liabilities of social media's influence among the masses. As social media has a dual impact on people i.e., it can be dangerous and useful parallelly, social media can be a great subject to explore. The idea of social media within people has been circumcised. So here, we try to break the boundaries and try to bring down different perspectives of social media together and present it. We go through the results of different research and try to understand the puzzling social media.

Keywords— *social media, applications, network, internet, connection, sharing, communication, platform, application.*

I. INTRODUCTION

Social media has been a global phenomenon for the last three decades. The use of social media has been globally inclined exponentially and social media has become a part of our daily lives. The term 'Social Media' was first made use of in 1994 on Matisse, a Japanese online media environment which later turned out to be one of the most important applications on the internet.[1]

Though it is difficult to articulate social media in a sentence, it can be defined as a method on the internet which is used to exchange individual information, opinions, likes, dislikes, and media. Social media can be used for connecting with friends and family, professional career requirements, education, business, marketing purposes, stating views on different issues, sharing beliefs, gaming, blogging and are also used for research purposes. All these features attracted the users to look at various social media platforms, which was there by a great success. This attracted various businesses to utilize social media as a bridge for their development. The interactive nature between users on social media played a key role in its development. [1],[2]

The Internet can be portrayed as the backbone of social media. Connecting people without the internet would be unattainable. The internet can be defined as the network of networks i.e., it is a globally connected network which is used for communication and sharing information within a connection. The connection is globally extended, and the information can be from any corner of the network Social media can be used for various purposes in our daily lives like it could be used for sharing media, i.e., sharing photos, videos, experiences, and songs. Writing web logs. Wikis, social bookmarking sites, micro blogging, gaming, promotions i.e., promoting goods, brands, services, and requirements.[4]

Apart from all these prolific uses there are some downsides with social media, which affect the mental wellbeing of humans. There could be severe consequences with social media not just on teenagers but also on adults and children. All of this should be taken into consideration and should following measures to avoid getting into complications and use SM with ease.[7]
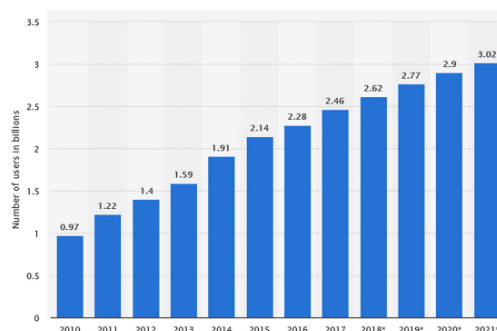

Figure-1: Bar graph representing growth of social media users between 2010-2021.[13]

II. SOCIAL MEDIA CONVENTION

Some of the most familiar and famous social media applications are Facebook, Twitter, Instagram, Reddit, WhatsApp, YouTube, LinkedIn, Pinterest, Google+, Telegram, Snapchat, Quora and Discord. From research, it was known that as of April 2017 Facebook had 1.97 billion active users daily and 66% of the users return daily [9].

According to a survey, 85% of people using mobile phones are using social media i.e., around 4.9 billion members are a part of some or the other social media. Today nearly 3 billion people are using Facebook, over 2.2 billion are on YouTube, WhatsApp, and Instagram and more than 1 billion are on WeChat and TikTok. This can state the importance of social media in people's lives. Table-1 shows the number of users monthly on different social media platforms.[11]

Table-1: Total number of monthly users of different social media applications

Social Media	Number of Users monthly
Facebook	2.963 billion
YouTube	2.527 billion
WhatsApp	2.2 billion
Instagram	2 billion
WeChat	1.313 billion
TikTok	1.093 billion
Facebook Messenger	1.036 billion
Douyin	730 million
Snapchat	650 million
QQ	574 million
Telegram	550 million
Weibo	530 million
Pinterest	463 million
Twitter	450 million

Developed countries are playing a major role in the growth of social media platforms. Countries with more populations are more likely to socialize as they get more opportunities. With advancement increases the facilities and new social media sites could be developed.

People of China, India and The United States use social media the most. China has around 1.06 billion social media users. Then comes India with over 470 million users monthly. Followed by a massive 302.2 million users monthly in the United States as per statistics of 2022. Going forward this count might be gigantic and could consist of 90% of the world's population. Table-2 shows the survey of people who think they will know more people if they are on social media in different countries. [8]

Table-2: Stats of people who think they will know more people due to social media.[8]

Country	YES	NO
Brazil	73%	27%
Chile	55%	45 %
China	89%	11%
India	71%	29%
Italy	46%	54%
Trinidad	76%	24%
Turkey	60%	40%
England	46%	54%

People of all ages use social media. They use it for entertainment or to learn or to connect with people or to play games or to share photos, videos or to do business or for educational purposes. Each of these works is not specifically allotted to an age group. Adults could play games or kids could connect with their parents (this is the modern era kids are learning to efficiently use social media). Every year a lot of people join social media. Adults between 35-44 years are increasingly populating the ranks of joiners, spectators, and critics [5].

More than 22% of the teenagers are engaged on social media sites at least 20 times a day and a major share of the remaining 79% get themselves on social media once a day on their cell phones. Fig-2 shows the social media usage by age.[8]
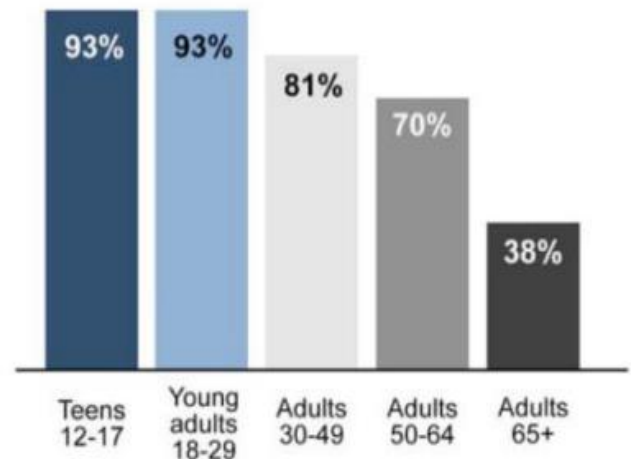

Figure-2: Bar Graph of people using social media drawn based on age.[8]

III. TYPES OF SOCIAL MEDIA

Different social media platforms have different characteristics and different expediencies. Social media platforms can be classified based on their functionalities as follows:

Online Social Networking: It is used to connect to friends and family online, share photos, media, articles, and messages. Facebook and Instagram will be falling under this category.[13]

Collaborative Projects: This enables joint and simultaneous collaboration of information by multiple users. Wiki talk is a collaborative project.[5]

Blogs: Blogs are social media instances which are used to write down information on various topics like experiences, facts, research results, stories, opinions, and personal information. Social Media Today is a blog application. [5]

Content Communities: These social media platforms are used to share different types of media between users. YouTube and Bookcrossing are a part of content communities. [5]

Virtual Game and Social world: These are social media platforms which connect people and could be used for playing games or to lead a virtual life. Minecraft can be considered as a social media of this type.[4]

Opinion, review, and rating; These sites help people to state their opinions and ratings over different things. IMDB, Letterboxd, Rotten Tomatoes and Yelp are some opinion review and rating sites.[13]

Answering Platforms: These are social media platforms which provide answers for different questions. The questions can belong to any sector. Yahoo! Answers, Quora can fall under answering platforms.[13]

Microblogs: Microblogs are just like blogs but are restricted to a particular limit. Twitter is a microblogging site. [13]

Not just these but there could be some more social media platforms which could support online streaming or social media platforms used for shopping or business platforms or bookmarking forms and more other than the types mentioned above. At times social media platforms can be a union of two different types. [4]

Some of the well-known Social Media Platforms:

Facebook: Facebook is a Online Social Networking site which connects people with the concept of sharing pictures, videos, articles, playing games and more. [11]

Twitter: Twitter can be both an online social networking site and a microblogging site. Just like facebook, twitter also works with sharing pictures, videos, opinions, articles, reviews and many more. We often do find promotional content more on twitter. [11]

LinkedIn: It can be considered as a business site, is more of a professional site. We can enter the status of our employment, education, achievements and our skills. This, unlike Facebook and Twitter, has no entertainment in it.

Youtube: Youtube is a video hosting site. It allows users to upload videos and manage the privacy of videos. If the video is public, the whole world could see it. Revenue can be generated using youtube in the form of Advertisements. [11]

WhatsApp: WhatsApp is one of the most popular social media applications in the last 5 years. It had 2.2 Billion users in 2022. WhatsApp, unlike others, is a peer to peer application. One can send a text or media or location or money only if they have the mobile number of the other person. WhatsApp can be considered as one of the most private social media sites.

Instagram: Just like Facebook and Twitter Instagram can also be considered as an Online social networking application. It allows users to explore, post media, connect with friends and interact with new people.[13]

LiveJournal: Live journal is a blogging platform which connects people with common interests. This helps us to maintain a note of things we do and could be used as a dairy.

Reddit: It can be considered as an answering platform or a blogging platform, it has a special kind of social media, it is mainly created for discussions solely. It is just made to elongate conversations between users.

TikTok: Just like Youtube, TikTok is a video hosting service.

Telegram: Telegram is a more secure version of Telegram. Telegram allows sharing of large files and is more private, secure compared to other social media platforms.

Snapchat: Sanpchat is a peer-to-peer media sharing site. It can only send media and connect people but cannot perform all other tasks like Facebook.

Pinterest: Pinterest comes under both media sharing and bookmarking platforms. We can share links and bookmark links of our own interests.

Based on the intent and functionality, there are many other social media platforms which are not discussed here. There are many other social media platforms which are used frequently by users and have a great effort in connecting people and sharing updates.

IV. EVOLUTION AND CURRENT STATE OF SOCIAL MEDIA

Through the years, social media has been advancing and is reaching out to the people widely and has been universally accessible. From connecting people to analytics and reporting, social media has traveled a long way down the lane of development.

As previously stated, the term social media was coined in 1994, long before that modes like Telegraph, Morse Code, Pneumatic mail, Telephone, Radio, CompuServe, The First Email, BBS, Usenet, LISTSERV, Internet Relay Chat, World Wide Web (WWW) were used for communicating socially.[3]

As aforementioned, stating a definition for social media has been difficult throughout the years. "When computer networks link people as well as machines, they become social networks, which we call computer supported social networks" was the definition stated in 1997 by Wellman in Annual Review of Sociology. Which was then called Virtual Communities, stating a Virtual Hub which connects people with electronic media. Then, in the late 1990's, the concepts of social networks were defined as "A connection which connects people and machines". After that virtual communities were trending and were being redefined in the early 2000's. The development of social media all along became a path breaking on par with the internet. [1]

The definition "Social media is a group of Internet-based applications that builds on the ideological and technological foundations of Web 2.0, and that allows the creation and exchange of user generated content" was the most popular definition of social media which was defined in 2010 by Kaplan and Haenlein and was cited in around 20,000 publications. Later Social network sites were as "A storage of people's profiles which can be visited by other users" defined in 2013.[10]

In 1997, the first social media site "SixDegrees.com" was created. Later in the next decade many social media sites were introduced and were accepted widely by the audiences. The next decade was all acceptance of social media applications. [4]

In 1999, different platforms such as QQ, Blogger and Live journal were introduced which encouraged people to share their writings on a large scale. Later Lunar Storm, Ryze Friendster Photobucket Tribe.net Delicious, Myspace and Linked in the next 5 years. Then comes the epitome of social media Facebook which was developed by "Mark Zuckerberg" started as Facesmash in 2004 as an application which rates the attractiveness of fellow students in Harvard University and grew out to be the key player of all the social media applications. Then came Orkut, Hyves, Hi5, YouTube Twitter, Spotify Tumbler, WhatsApp, Pinterest, Instagram, Viber, Periscope, Minds and Mastodon. Throughout the years social media started as a small application which created profiles and socialized with others or classmates to be helpful in education, marketing, business and many more sectors today. This is how social media grew up to be a global phenomenon. [3]

In 2009, results of a research were like, there were around 10 hours of content uploaded on YouTube. Flickr, an image hosting site, had 3,000,000 images. 75% of the usage on the internet was all about social media.[5]

It was nearly a decade ago, which had these statistics. Today these numbers could have grown enormously. Lately social media is playing a different role and has been producing influencers, who share their life experiences and the lessons they have learnt from their mistakes. Influencers like Malala Yousafzai and Maria play a great role and have been an inspiration for many. Many social media sites were introduced and are trending post-pandemic. It played a key role in helping people in need during the global pandemic. This states the evolution of social media all along.

The framework of social media has changed over the ages from difficult to access to mobile and data driven. From difficult to communicate to constant and mass personal interactions. From no results available to more than required number of results. From no connections to connecting people from every corner of the world. From being unable to organize to organizing the unorganizable. From out of data storage to unlimited data storage.[10]

Afresh, social media platforms have been trying to improve their services by adding new features for instance, some of the well-known features which are updated recently in social media are shorts on YouTube, spaces on twitter, status on WhatsApp and stories on Instagram. Lately, social media commerce and social media has been rising. Social media has become a great boon to the marketing industry. As social media currently is growing, when tagged to it marketing has increased. Currently around 4.9 billion are using social media which might cross 6 billion in near future, in no time, social media will be reachable to every person in the world.[11]

V. OPPORTUNITIES AND OBSTACLES OF SOCIAL MEDIA

Social Media bestows multiple facilities to the users. Social Media as an entity can have its own characteristics which are advantageous to the user. On the flipside, social media can be unfavorable and dangerous at times. Social media has a dark side in which situations can be difficult. We are going to discuss both the pros and cons of social media in this article.

A. Opportunities:

As we know social media has been a game changer in many fields today, it has some opportunities which can be utilized to be successful. Some of those features are as follows.

Social Networking:
The foremost goal to develop a social media application is for communication and social networking. Social media helps to connect people even from the remote corner of the world. Social media even berings like minded people and lets them interact. This helps in making bonds stronger by sharing life updates in the form of media and texts. Due to its reachability, it made communication easier. We can see Whatsapp and Facebook application's helping people to communicate effectively. [1]

Marketing and promotions:
Lately we have been witnessing the role of social media in marketing. We often do find promotions on our social media platforms. Social media revolutionized marketing and made it easier. As social media is very reachable, marketing can be brought to the social media platforms of users. This influences people to buy commodities. As the interaction between user and the company can be two-way, customers are willing to purchase goods and can provide reviews to the company this could cause a win-win situation.[1]

Business:
Social Media can facilitate small business enterprises to reach out effectively to people. After the pandemic we did see a lot of businesses growing out big due to social media. Social media commerce has been a game changer for small business enterprises recently. Knowledge management would also help small businesses to upgrade themselves. Marketing and promotion on social media can help with a better establishment of business. [1],[8]

Analyzing trends:
Not long ago, social media has been gathering data about user interests from different platforms and has been working on it to make things better. It is used for analyzing the future and predicts real world outcomes. Social media is being utilized to gather large amounts of information and is being used to forecast further outcomes. The research [12] has predicted the box-office revenue of movies from Twitter chatter. [12]

Job seeking and professional career:

Applications like LinkedIn are being used by companies to recruit employees. Advertisements with specific requirements on social media sites could reach out to people who are looking out for employment. This could even reduce the cost of appointing an employee. As there are more than 100 million users it could be a great place to look out for talent.[1]

Education:
Social media has been helping users with making them familiar with things. It helps people to learn how to communicate and socialize. It also helps people to develop their creativity and intellectual skills.[8]

Entertainment:
Social media sites have been offering entertainment for a while. Social media sites allow people to share media and articles. It also allows people to play games, watch movies and videos in virtual communities. Applications like Discord application encourage and allows people to stream various entertaining programs.

Research Purpose:
Social media made accessing information easier. Getting to know facts and information about various topics with different points of view of people has been a major part of social media. This helped people to present their inquiries, get to know about new things and share things. It helped charity requirements to reach wider to people.*[8]*

Economic Impact: social media can even play a major role in Economic impact. The content which is used in social media could influence its audience and could cause great damage or great profits. Not just economic impact but social media could even create moral impact on various subjects. *[5]*

B. Obstacles:

As the scope of social media falls under public domain, problems are a part. Just like opportunities, social media is highly prone to get into issues, these problems might be psychological, physical, or financial. This is the farther side that we have been looking for, these are some of the disadvantages with social media.

Cyber crimes:
There is much scope to face backlashes using social media. We can be bait for cyber crimes. Be it familiar or unfamiliar, these are very dangerous. At times these could cause financial loss or information loss or loss of mental peace. Social Media at times may not be monitored which might cause loss to its users.[2]

Not just these but there is a chance of facing severe consequences due to Ransomware, denial of service, cross site scripting, malware into a users system would cause various troubles not just with the device but even in real life.

Identity Theft:
Though this falls under cyber crime,Identity theft particularly has been a great issue on social media. This is impersonation of people without their permission. This might cause confusion and at times it gives rise to trust issues. Lot of people are suffering from identity theft every year. Fake profiles also have been causing harm to people in recent years. [2]

Privacy Issues:
Due to unaware situations users get into situations which are life changing. Privacy breaching could be a great disadvantage in many ways. It could give a chance of accessing everything the user ever had. Digital fingerprints, bank details, personal information, passwords and everything could be accessed.

Even location of the individual could be continuously tracked if there is any privacy breach.[8]

Addiction:

People are suffering from a severe addiction to social media and mobile phones. As social media has become a part of daily life, it has been routine. Lot of people do not even know that they are addicted to social media. This might cause some severe issues. Teenagers are mainly facing this problem. Constantly staying on social media might cause dispairment with the real world and could create a void with their life. This might even cause mental problems due to excess usage. Addiction could also make people deprived of sleep. [7]

Social Isolation:

Due to excessive use of social media, people could be facing severe social isolation which might cause various psychological issues.At times users even forget to do their daily routine like eating which might cause severe health issues. [7]

False Information:

Quick circulation is often seen on social media. Any news could be on social media in no time. Taking this to their advantage, people often circulate fake news, which could seldom be dangerous. All the news which is on social media hbelieving news on social media. False information could make people prone to phishing attacks on the internet.[9]

Depression:

Due to excessive use of social media sites or electronic devices, people undergo severe trauma to unleash the urge to use them. Overcoming this depression would consume a lot of time and could be inevitable at times. It also causes heavy anxiety issues and can make people go numb.[8]

Lot of these can cause catastrophic damage to an individual. It can make them lose their conscience and forget their responsibilities. Some of these health issues could even ruin people's lives.

VI. PREEMPTIONS AND PANACEA OF SOCIAL MEDIA TROUBLES

For every problem, there is a solution, just like that social media obstacles have some ways to bring users out of the issues or methods to not get into the issue. If followed this could lead to a good social media experience. These are some of the precautionary measures that should be taken on social media.

Choose carefully and pick the application:

While using social media for entertainment or for any other purpose, we need to select the application which is appropriate and is secure. This could help us to overcome issues like privacy breaches. Read the instructions carefully before joining a social site as there will be no problems with the applications in future.[5]

Media sharing:

Think before sharing any media on any social media site. Select the media which cannot be harmful to you even if breached in public domains. Do not share media with unknown people and do not share media if not necessary. This could help avoid privacy breaches.[5]

Monitoring:

Monitor your usage of social media. Take precautions, do not use social media if not needed. Note down your social media usage time and temporarily deactivate or stop using it if there is over usage.

Be socially active but careful:

On social media never try to get into fights if unnecessary. Be active on social media but do not disturb anyone. Be interesting and only share information if you like to. Be humble and do not hurt others on social media. You need not be professional on an entertainment site. Be as casual as possible and do not be picky.[5]

Be Honest:

Do not fake your information. Use the application only if you are qualified. Give information correctly on professional sites like LinkedIn. Do not try to create fake profiles and participate in illegal activities.[5]

Take Care of Privacy:

Today in the modern era, compromising privacy could be a great issue to an individual. Be careful with maintaining privacy and do not enter unnecessary sites and enter your information. Always go through the privacy settings before entering a social media platform. Check whether the sites are genuine before entering them.[8]

Be aware of Cyber Crimes:

Delete profiles which you are not using currently. Maintain the profiles which you're currently using in a systematic way this could reduce the chances of getting attacked. Do not overshare information or media to anyone whom you are unfamiliar with. Use secure methods like e-mail or drives for sharing data. Do not use third party applications for any kind of requirement. Turn off all the cookies which you can find and do not accept any cookies from unknown users. Even if you are a victim of a cybercrime due to any social media application, do not panic. Report to the concerned social media team and your problem will be sorted out. This could be helpful even to other users. [2]

Monitor you actions while using social media:

Take care of your actions, do not click on any links which you find suspicious on social media sites. Do not log in to any other site than the main application page. Do not share unnecessary links with others. Do not open unnecessary websites. Sleep well and do not use social media for too long. [5]

Get to know secure methods:

Learn about safe methods to enter social media. Use antivirus while downloading anything from social media to reduce the risk of malware getting into your system. Get to know about more secure options on different social media applications and disable app tracking and location facilities.[2]

VII. WORKING EXAMPLE AND RESEARCH RESULTS

Let us consider Twitter as a social media application to state the insights that we discussed in the article. It is a social media platform which was developed in 2006 as twttr by the members Odeo and then turned out to be Twitter as of today. Tweets are the instances of twitter which state the status and have a word limit of 140 words.[12]

Twitter is an online social networking and microblogging platform which is being used by around 470 million users monthly. From research, the results stated that Twitter had an estimated 517 million users overall in July 2012.[4]

Studies stated that Twitter was the most popular resource which is used for studying trends among people. Research also stated that Twitter had the most negativism. Twitter data can also be used for identifying breaking news and detection of natural calamities. [11]

Lot of research studies between 2011-2016- mainly focused on data from twitter for analysis which also stated that tweets with more emotional content received more likes and retweets as a byproduct. Twitter data also played a key role in getting insights of positive effects in major/critical events.[9]

From research conducted by Finance students in China on a set of 960 students in 2020, 9.2% of were on twitter.[7]

Twitter today is one of the biggest social media platforms. There are several opportunities and obstacles twitter has just like every social media. For instance, Dell quoted that they had earned a hike of $1 million in their revenue just by promoting themselves with sales alerts on Twitter.[5]

Twitter analyzes the complex data of a user and recommends accounts users can follow based on the topics tweeted and the pattern of use.[10]

Research was conducted on a dataset of 3 million tweets from twitter about movie box-office revenue. The main goal of this research was to state that data from social media can be used to predict real-world outcomes. The results which outperform are shown in the original vs predicted graph in Fig-3:[12]
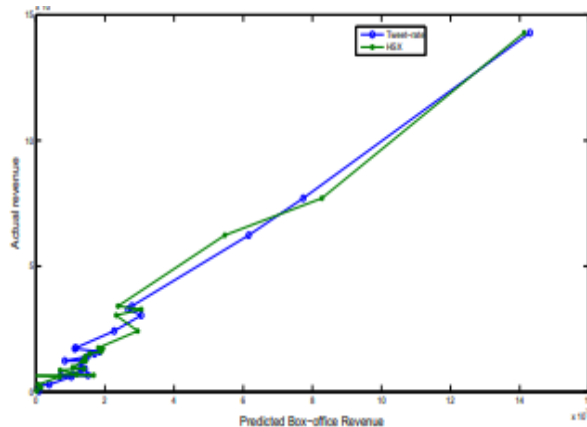

Figure-2: Predicted vs Actual box office results.[12]

Twitter bought an application called Vine for $970 Million in 2012.[13]

Coming to the farther side, Twitter uses a location-stating application called Geo-location tracking. This should be turned down if you do not want to disclose your location.[2]

Hackers regularly share random links containing ransomware when they are looking for prey. When a user clicks this link, he would be under attack by the hackers. This should be steadily checked by users not to undergo any attack.[2]

These are some of the examples and research results which are based on twitter. All these happen even with other social media sites.

VIII. CONCLUSION

The research mainly stated the characteristics of social media along with the pros and cons caused due to it. Today, social media is more than a medium for connecting people. It has been into different industries like marketing, business, entertainment, gaming and more. As social media is accessible throughout the world and can be used even from a remote corner of a forest, users should be careful with its usage. Although there are tremendous numbers of uses with social media, it has some flaws which should be taken care of for a smooth social media experience. As the aftermath can be traumatic for a while, preventing it could be a better option at least for the peace of mind. The future of social media is going to grow even faster as the technological era has been upgrading continuously in every field. These are some of the precautions which could prevent users from becoming a prey for social media anomalies.

I would like to conclude on a note, that social media when used with care could create wonders and could be path breaking with an individual or an institution as due to its omnipresence in the modern world. Even a slight mistake could cause huge damage. So, using social media for a win or a loss is totally in the hands of the user. So, in brief social media is completely an enigma and users should be careful with it.

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