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The Influence of Social Media

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The Influence of Social Media

Abstract
This paper is about the various influences that social media has. It ranges from the way social media has impacted governments to the laws being made on how people interact with each other.

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THE INFLUENCE OF SOCIAL MEDIA

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INTRODUCTION

When walking down the street it is almost impossible not to see someone with a cell phone in their hand using social media. Social media is something that has become so commonplace in today’s world that users have stopped thinking about the costs that come with the use of social media. Many do not even think of what life would be like without social media. Social media is defined as “websites and applications that enable users to create and share content or to participate in social networking”. Today, we have many forms of social media include Facebook, Twitter, Instagram, YouTube, and Pinterest to name a few. Social Media is still relatively new even though it has been expanding rapidly and is now commonplace. It wasn’t even until 2004 when Facebook was founded and from that time to now it has grown to include 1.3 billion users. Facebook alone accounts for about 9 percent of all internet traffic (Data Center Knowledge). YouTube was founded in 2005 and now has more than 1 billion unique users visit the site each month, over 100 hours of videos uploaded every minute, and has over 6 billion hours of videos watched each month according to YouTube’s statistics page (Statistics). Social media is impacting every part of our lives today. It impacts the way software is being developed to the way that we interact with others. The impact of the usage of social media is that the world is more connected now compared to ever.

Social revolutions across the globe are using social media to help promote their cause and spread the word of what is happening and gain traction to help cause change such as the Occupy Wall Street movement in the United States, the Arab Spring in various Arab countries, and the Umbrella Revolution in Hong Kong. It has also been used to promote knowledge and raise money for various organizations and charities. One example of this is the ice bucket challenge which has raised over 100 million due to its spread on social media which is a “3,500% increase
from the $2.8 million that the ALS Association raised during the same period last year” (Diamond).

Social sites and social media have a major influence on today’s world. From revolutions and the government creating laws that are related to social media to companies using social media to get a closer insight on their consumers, social sites have impacted every part of users’ lives.
EVOLUTION OF SOCIAL MEDIA

Social media and social sites haven't always been so popular or widespread. When they were first being built, developers were still learning the new tools and users were not completely sure about how they felt using such sites. Like anything that is new the first sites were clumsy and not too popular. It took time to build up to the social sites that we use today and these sites are constantly undergoing changes and improvements and evolving. Even though many social sites are still relatively new being built around 10 years ago, they have been major changes to them and the way that they are used and the costs associated with them. When the sites were first created the major costs associated with them came from the amount of servers that the sites needed to buy and the cost per GB of storage. Over time though these costs switched to the cost of up time, the cost of bandwidth, and the cost of data storage. The original purpose of social sites, to connect real world friends, has even evolved into something much more complex.

Today social sites have a different purpose than when they were first created. Due to the sheer size of social sites some, such as Facebook, have even been compared to a country. Today’s social sites are more about building a community of users rather than connecting to friends that are known in the ‘real world’. This helps explain the size and numbers of companies that have started using social sites ranging from Facebook and creating a brand to sites like Reddit where they can have AMAs to help explain concepts of their companies that users are interested in. Businesses can use these sites to help improve their customer service. The number of users on social sites means that they pull a lot of influence. Events can take seconds to go viral, news can spread in seconds, and mistakes can be immortalized. This means that the world has become a smaller place where actions need to be watched.

Over time the sites and their features have gotten more complex also. Facebook has added new buttons such as the like button and the ability to remove posts that a user has posted that they
now find embarrassing or crude. The complexity of the various sites make them more enticing for users and have changed the behavior of how humans interact with one another. More and more often people are spending time on their phones rather than the person they are hanging out with. Private arguments and situations are becoming increasingly public as they are posted about over Facebook and other sites.
SOCIAL MEDIA IN REVOLUTIONS

Egypt:

Egypt, Tunisia, Libya, and Yemen are a few of the countries that were a part of the Arab Spring revolution. The Egyptian Revolution only took two weeks and three days and went from January 25th, 2011 to February 11th, 2011. This revolution was spurred on by social media sites. The protesters used sites like YouTube to post videos of the protests in Maidan Square in Kiev, Ukraine on the Egyptian Revolutions various social pages to help show protesters in Egypt various protest tactics. The even had teams of people who would go on social media sites and search for protests around the world in order to find new tactics to use. They would then translate the videos and share them to help their revolution (Ketchley). The revolution started to truly gain traction with the death of a street vendor, Tarek al-Tayeb Mohamed Bouzazizi, who burned himself after the government took over his street stand, due to social media this event was spread to millions and the revolution gained supporters. It was only days after this event when the Tunisian government started to collapse (Simpson).

The result from the aftermath has affected more than just the Arab countries though. Thanks to social media, President Obama has an image of being weak and indecisive after not following through on his warning to Bashir Assad to not use chemical weapons and then doing nothing when they were used. Britain has shrunk in status do to the fact that their Parliament voted to not bomb Syria in August 2013 (Simpson). Thanks to social media people and countries have a hard time shaking off the images that sites give them. The revolutions were gaining so much power that the Egyptian government shut down and had a black-out of all social media sites and cell phones. Social Media was what allowed the Egyptians to connect and show the rest of the world what was happening to them and how they gained support (Milian). This affected
the world and the White House even made strong calls to have the Internet restored to allow the people to continue protesting peacefully (Nguyen).

This was not the first time that a government shutdown social media and the Internet due to protests though. The event has been compared to the Iran internet blackout in 2009 which also happened due to protest throughout the country. Like the people in other countries who get blocked through they found a way to use social media again through proxies and were able to continue rallying. Despite this there was a 90 percent drop in data traffic to and from Egypt (Richtel).

**Hong Kong:**

The Umbrella Revolution in Hong Kong was another revolution that used social media. The Umbrella Revolution used images particularly well. An image of a man holding two umbrellas arms spread in defiance in a cloud of tear gas, wearing a mask and goggles has become a symbolic image for the revolution and has been compared to the famous ‘Tank Man’ photo of 1989 where one man temporarily stops a line of tanks when the Chinese government was suppressing the Tiananmen Square protests of 1989 (Brinn). These images are powerful, so powerful that the Chinese government shut down Instagram in order to try to stop the images from spreading and gaining popularity along with the usual bans on Twitter and Facebook.
This image has been shared thousands of times on Twitter alone though (Dastagir). This revolution started on the 28th of September, 2014 and is still ongoing. According to Twitter there have been than 1.3 million tweets about the protests so far (Dastagir). These are not just Tweets
from inside the country but international. In the country to help communicate the groups are using social apps such as FireChat to determine when to meet up (Dastagir).

**United States:**

The Occupy Wall Street movement in the United States began in September 2011 as a grassroots protest against the inequality of the financial situation in the United States. Social Media was behind the speed and strength that helped push the movement and allowed it to grow so quickly. In order to keep the movement alive they used various forms of social media such as Facebook and Twitter. 872 groups have formed in cities across the United States using the Occupy Together website as a central hub (Ngak). Research has found that the major use of Facebook during the movement was used for the recruitment of people and resources to local occupations, information sharing and storytelling across groups.

**Conclusions:**

These social revolutions mentioned are just a few of the ones that have occurred or are occurring around the world that use social media. All of them show what a powerful tool social media is when it comes to changing the minds of people, spreading the word, and getting people to do something. Governments around the world can see the power and impact that social media can make when used effectively and some have even tried to set up blocks on their social media sites to stop the influence of social media on an entire country. This doesn’t always work though because the users can set up proxies and still access these social sites. The proxies are software that can trick internet providers to thinking that the person who is online is actually located in a different city or even country and thus they will be allowed access to the sites that were blocked to them in their current location. These software can also be blocked by governments though if they are known. There are even sites like Herdict.org which “collects and disseminates real-time, crowdsourced information about Internet filtering, denial of service attacks, and other blockages”
"Herdict"). This site is the first of its kind and is used to monitor blocking in real time and was used in the Arab Springs revolutions by leaders to see what was happening to the services while they were limited in getting their information from Egypt.

The government, the body that creates laws and runs countries, fear the impact that social media can have. Social media has gotten the attention of more powerful countries to look at the revolutions and going on smaller countries. If a big enough group of people are concerned with something happening in one county try it puts pressure on the leader of that country to help out the other country. It is not only the governments that are interested in Social Media though, researchers and users also have a stake in what happens on social sites and the internet worldwide. The cut-off that happened in Egypt was not the only one:

Few governments have cut off access entirely; Myanmar did so in 2007, as did Nepal two years earlier. But at least 40 countries filter specific Internet sites or services, as China does by prohibiting access to some foreign news sources, said Prof. Ronald Deibert, a political scientist and director of the Citizen Lab at the University of Toronto, which tracks the intersection of technology and politics. (Richtel)

Cutting off internet connection is no longer just a single countries problem, according to Andrew Noyes, a Facebook spokesperson, “limiting Internet access for millions of people is a matter of concern for the global community” (Richtel). While Professor Deibert, a political scientist, stated that when a government tampers with the Internet it incurs “potentially serious diplomatic, political, and economic costs” and citizens and business now rely more than even on the Internet (Richtel). Social media has the power to change prospective and minds of countries. If it can change the minds of countries and people with political views it can certainly have the power to change the mind of people on how they use social media.
SOCIAL MEDIA IN REGARDS TO THE LAW

Governments also make laws and regulations regarding the internet and thus social media. There are laws regarding the transfer of personal identifiable information and encryption. Behind the scenes there is a lot going on with social media sites. The sites have to store their data and distribute it, they have to keep their sites up as often as possible otherwise people will go to other sites, and they gather data and even sell this data to other companies.

Data Centers:

Social media, whether it is Facebook or Twitter, uses data centers to store all of the data that its users generate. One problem with this though is all of the emerging laws regarding the movement of data across countries. When looking into data that must be moved across countries the data lifecycle has to be considered first. The data must be created and captured and depending on the way that it is captured there are various forms of protection required to keep the data safe. Next the data must be indexed and classified to see if it contains PII or personal identifiable information, it must also be looked at to see what type of documentation it is. After this the data must be stored and managed. If the data contains PII then the organization might be required to encrypt the data. Encrypting the data means that it is going to increase the transfer time of the data and the amount of space the data will consume to be stored. Once the data has been stored and managed it must be retrieve and published meaning that after the data crosses a border it must be made accessible. After this the data must be processes so that it is only used for authorized purposes and it is in compliance with all laws. Next it must be archived when it is no longer needed and finally, it must be destroyed ("Data across borders").

Every step in the movement of data across countries takes time, money, and effort. Organizations must hire lawyers to make sure that their data is in compliance with laws when
crossing country boundaries and they must make sure that the data is secure so their customers are not put at risk. Laws must be followed for both countries. This means that it can be easier to transfer data from one country to another with more lax laws. For social media the cost is even greater considering that social media deals with social data and will contain PII data.

**Privacy**

Privacy laws are also a major cost factor with social media. This cost lays with consumers, companies, and governments. Although social sites are social there is still an issue with privacy. Many social media sites have struggled with finding this balance and Twitter, Apple, Snapchat, and Facebook all have controversies about the balance between protecting user data and cooperating with law enforcement. Even the government has had issues when it comes to social sites and privacy laws and has spent millions on laws to help protect users on social media sites and their security.

The Federal Trade commission or FTC and the state attorney general are often the ones to help protect privacy in regards to social sites. When it comes to social sites there is a fine balance between what is private and what is not. There was recently a case with Facebook and its privacy policies. They wanted to sell the names and pictures of users to be used in advertising products that the users have liked. If the user was underage then it was to be assumed that by liking the product and being on the site the parents have already granted permissions for this information to be used. The FTC got involved in this case though and used it to gain access into Facebook and generate much greater influence over what Facebook could do with its user’s data (Claypoole). Facebook isn’t the only social site to try to sell its users private information in such a way though. The FTC has dealt with similar cases with other sites such as Twitter and MySpace.

There are many ways that privacy laws can relate to social sites other than just the selling of personal information. Another way that they can relate is through the exposure and loss of private data. The type of privacy laws that relate to this are similar to the ones that are used when
credit information gets exposed. In such cases the company must notify all who are affected.

With social sites the situation is slightly different since the users are often the ones exposing themselves the sites do not have to notify them when their information is being used. The only time when they must be informed is when they have exposed data that the user had marked as private. This allows the social sites to move more freely knowing that most of the data and risks associated with protecting that data are on the users.

Due to the increasing usage of social media and people posting information to the sites about themselves many employers want access to this data. Due to this privacy laws have risen about restricting employers from demanding access to their employee’s social media sites when the employees do not have public accounts. Other such laws relating to privacy of social accounts and work have also risen such as an employee’s right to not accept a friend request from a boss or be forced to access their social sites while management watches (Claypoole).

Crimes

Social sites are social places. Users share all types of information on these sites. Including information about when they will be gone on vacation and if anyone can watch their house or when they are not going to be home from work until late. This type of information is perfect for criminals. It gives them everything they need to know about a target and makes it easy for them to commit a crime or break into a house. This type of information also makes it easy for people to stalk others. Even with some of the built in function of social sites such as blocking there are many workarounds that users can use to access the information that is out there about the victim of their stalking. It is even easy for one user to pretend to be another thanks to the information they can get from social sites. They can take someone’s name and pictures and create accounts on various websites which can cause trouble for the original user. If they used the stolen identity to go to inappropriate sites or post information that could harm a
person reputation the original user might later get hurt when an employer is looking them up before an interview.

Cyberbullying is also an issue that is highly related to social sites. With the help of social sites bullies can now target their victim at all times. Harmful content such as videos and images of a bullied user can be posted and ridiculed by a larger audience than ever. Besides posting information and stating harmful facts about a user, bullying can take on different forms. Another type of bullying that can now be done is one user pretending to be someone else and being a friend to the bullied user while really making fun of them and tricking them into telling a fake account private information. They can then later take and post the private conversations to target the bullied user. In some cases cyberbullying has been so extreme that it has lead to the suicide of the bullied user. Recently due to the increase of cyberbullying and the problems associated with it laws have started to appear to help with the issue. Although many of these laws may be civil laws there are some criminal laws that are related to the issue. Existing laws, such as criminal harassment laws, have also been applied to try to help limit and punish those who are bullying others.

Other types of crimes can also be linked to social sites and their usage. With data mining people can now be profiled as being high risk for certain types of crimes and it is even possible to stop a crime or get the help that someone needs to prevent a crime from happening. Detectives are also using social sites more and more often to investigate crimes. GPS locations being shared with when posting, YouTube videos of fights, and tweets about a user's location have all been used to help solve crimes. Social media can also be used as a sort of neighborhood watch where users can form groups on a site to post suspicious information. The police have used groups like this before to link crimes and find the criminal.
Social sites also make it more difficult for a person to bury their past which can have various consequences. When someone makes a mistake that mistake can be found by employers and others if they dig enough. Even if a user tries to delete the posts about a certain incident they cannot control everything on social sites. This means that if someone committed a crime while younger and then got a deal to have the records expelled, employers and others can still find out about the crime which could have negative consequences for the user.

Crimes done online with social sites can cause problems due to jurisdiction though. It can be hard to pinpoint where a crime has taken place or even the user behind a crime. There are many types of crimes that can happen on social sites that are completely online crimes such as internet scams. There are many types of internet crimes that use social media including manual liking where the user is asked to manually like an item to get something, like clickjacking where a user might think they are liking one thing but due to an invisible iframe on the page they are actually liking something completely different, and phishing which can come in various forms such as emails where you are asked to click on a link and record your information, such as a password and login, the attacker is then able to gain this information and access the users account and user their personal information in any way they choose. There are also techniques that can be used to track the keystrokes of users to collect their data. This means that if a computer gets affected someone could trace the user's keystrokes and figure out all of their passwords. Applied in a broader term this means that they can figure out all banking information and use that information to open their own accounts even. Something similar to this is tracking tools which track a user's movement across the internet. The information that is gained from this is often used by companies for marketing purposes. These are just a few of the many online crimes that use social media that are currently operating.
TYPES OF SOCIAL MEDIA AND PREFERENCES

Types of Social Sites and Their Purpose

When most people think of social media they think of Facebook or Twitter, sometimes a person will include other types of social media such as YouTube but this is not always the case. In reality social media is much bigger than just these few main social sites. Social media includes blogging, micro blogging, online ratings, social bookmarking, podcasts, forums, message boards, social knowledge sites, geolocation, multimedia sites, and social networking sites which are most commonly associated with social media ("The different types of social media"). Although there may be other types of social media this list gives a broad range of the main types that are currently out there and being used. Many times the types overlap with one another and it can be difficult to categorize a single site into one category.

Social networks are among the most common form of social media. This category includes sites such as Facebook and LinkedIn where users can have a profile where they can develop relationships with others and form communities and share information. Users often share links, photos, videos, posts, and other multimedia ("The different types of social media").

Blogs are websites that can be a part of another website where articles are written and posted for others to read, often people are able to leave comments about the blogs at the bottom of the blogs sites. Some examples of blogs include WordPress and Blogger ("The different types of social media").

Microblogs are a shorter version of a blog where users can still share information in smaller amounts. Some of the popular microblogs include Twitter which limits its users to using 140 characters and Pinterest where people share images and videos on boards ("The different types of social media").
Online rating sites are used for users who want to rate products and see the rating of products or places from other users. These sites allow users to leave reviews about specific places, locations, products, etc. so other users can have an idea of what to expect when they go to the location or buy the product. Some of these sites include Amazon and eBay where users can look at other user’s reviews on a product before buying it themselves.

Social bookmarking sites, such as StumbleUpon and Digg, allow users to save and share their favorite websites from one location. Other users can rate these sites, tag them, and leave comments. These types of sites are useful to help increase the visibility of websites and allow users to find sites that they might be interested in.

Podcasts are audio or videos files that are put online for people to download or stream and listen to or watch. Many of them are informational and are a popular option for people to listen to while driving. Podcasts got their name from the words “broadcast” and “pod” which is a reference to podcasts popularity with iPod users ("The different types of social media").

Forums and Message boards are one of the oldest types of social media and allow users of the boards or forms to talk and discuss a specific topic. Most of them are centered on a specific topic where users can ask questions about that topic. Popular examples include stack exchange which can be broken down into many categories such as programming or music. Forums are also used in gaming to help users figure out the best strategies or where a certain item in game is.

Social knowledge and wikis rely on users to add content to build up a central hub of knowledge for other users to refer to, they can be open to the public or restricted to people in a certain group. Popular examples would include Wikipedia and Answers.com.
Geo-location is a type of social media that relies on a user's location. It allows a user to check in at certain locations and find friends who are nearby and get vouchers for local businesses. A popular example include Foursquare although other social sites such as Facebook do incorporate this into their functionality ("The different types of social media").

Multimedia include sites that reply primary on sharing multimedia like videos, photos, infographics, and PDFs rather than text. People can usually leave comments on these sites and popular examples include Instagram and YouTube.

Social News is a type of social media where users can post various news items and links to outside articles to inform other users who can then vote on the items. Usually the voting system is showcased among the community to help users share links and comment. An example of a social news site include Reddit although this site includes more than just news items.

The Code

Looking behind the scenes on social media there are differences between the coding types used. Some of the bigger and more well-known social media sites have even developed their own code to help with maintaining and up keeping their code. Sometimes, one social site could even have multiple types of code behind the scenes working together to keep the site running. Often the reason for switching the type of code used or using a certain type of code is to help the site run more efficiently. Sometimes a certain language is better for getting a job done. Facebook has recently started to use D compared to C++ while coding and has even changed some of their code to D. The reason behind this is that the code written by the D team at Facebook showed an increase in build speed and running speed according to a post from the Facebook team on Dlang.org. D is a recent language that formed partly in an attempt to deal with some of the problems with the C++ language and create a simpler coding language that makes
use of the most modern programming habits. The D language is also similar to the C language in many ways which is needed for Facebook as they have code written in C also and needed the compatibility between the languages. In addition to the usage of C, D, and C++ Facebook takes advantage of many other types of programming languages. Their servers also run Linux, Apache, MySQL and PHP. In addition to these existing coding languages they have also created their own to help them keep up the growing site. This includes flint which is their lint program which issues the lint errors so that warnings will appear automatically in their code review system. The reason why they created a new lint program was due to the reasoning that the lint programs for C++ that were out there were too slow for them and did not support all of their features ("Under the Hood: Building and open-sourcing flint").

Twitter, which has a different function compared to Facebook also uses a variety of programming languages and techniques and programs to help their site stay up and running. Twitter used Ruby on Rails but when they started to scale their site they discovered problems with the language. They believe that the language was causing some of the problems with their infrastructure including the site shutting down on multiple occasions. When switching from Ruby on Rails they thought about starting from scratch with a new language of their own or using Java or PHP but ended up deciding on going with Scala while keeping Ruby on Rails for most of their user facing web pages. The reason why they choose Scala was that Ruby on Rails was okay with front end processing but was having problems in back-end processing. Scala was a more reliable language compared to Ruby and was better with multi-threading when compared to Ruby. Overall, Scala and Ruby complemented each other with Scala having the structure that Ruby lacked (Venners). With adding a new language the company has had some difficulties such as having support and knowledge of how the new language works. Programming in the new IDE
has taken them time to learn and has been frustrating when they knew how to code something in Ruby but had to code it in Scala according to Alex Payne, a Twitter developer.

These are just a few examples of some of the languages used for social media sites, due to the flexibility of coding and the infrastructure there are many types of languages that are used. For example, while Facebook uses a lot of JavaScript for its front end client side the back end servers side uses Hack, PHP, C++, Java, Python, Erlang, D, and Xhp to name a few. Then you have the database side which uses MySQL and HBase. While all social sites might not use as many types of languages this gives a good example of how complex the sites can become and how many languages must come together for a site to work. Linkedin.com is an example of a simpler site that only uses Javascript, Java, Scala, and Voldemort throughout their infrastructure. Each one of these languages has its own ups and downs which leads to a different way to upkeep the server. As the site grows the code will grow with it as well.

Sometimes the techniques and code and language for one company may not work for another. Such is the case with Twitter and Ruby on Rails. Due to the traffic on the Twitter site and its purpose the language was failing them when they needed to scale their site. Yet, other social sites started to switch to Ruby on Rails during the same time that Twitter was trying to get off of it. Such as Yellowpages.com. Ruby on Rails, like many other languages, has had many debates on its efficiency. Many developers will say that the fundamentals of the language are flawed and un-scalable while others have argued the opposite (Arrington). This shows how important the language is for a site when it is first being created. The developers cannot think only of where the site is at during the time they create it but where they want it to go and how much traffic the site might generate. They also need to think of what the purpose of the site is at the time of creation in order to find the best fitting code. Picking an easy or popular language
means that there could be many developers to help build the site but this could cause problems later on in the lifecycle of the social site. Doing careful research of what type of language to use will save time and money later on. When switching languages it affects the learning curve of those in the company who were working on the current code and the programming style that was used.

Many social sites start out using one basic language and expand on their language once they start growing and picking up popularity. Depending on what the site needs to get done the code running behind the site switches. Many times as the site grows the coding language limits what the site can do such as the case with Twitter and the programmers need to switch the main language of the site to something new. Social sites also evolve into using multiple languages once they start growing. The reason behind this is due to the fact that different languages have different benefits and certain languages can get the job done more efficiently compared to another. Sometimes a social site will create a new language or program for themselves. The reasoning behind this is that there might not be an existing language out there that is severing their needs as well as it could. By creating a new language or program such as the flint program with Facebook their programmers can accomplish what they need to more easily.

**Demographics:**

Besides looking into the backend of social sites it is also important to look at the users. Over the years users on social sites have been increasing greatly. Due to each site having a different purpose each site has various demographics of users and amount of users. Learning about the demographics and users for each site contains value for various people. It helps businesses know where to target and what type of social site they should focus on. If the majority of their consumers are using a certain type of social media then it would be good practice for
them to also join that type of social media. This way they can have the most influence over the people who they want to sell their product to. In 2014 Facebook had 1.32 billion users, which topped the amount of users on any of the other top social sites. They have around 33% of all social users on their site. Instagram has around 200 million, Twitter 271 million, LinkedIn has around 300 million and Pinterest has about 70 million. Added together social sites contain about half of the world’s population (Brodzky).

In 2014 Facebook had 1.32 billion users. Out of these users, 5.4% were between the ages of 13-17, 23.3% were between the ages of 18-24, 24.4% were between the ages of 25-34, 31.1% were between the ages of 35-54, and 15.6% were aged 55+ (Brodzky). The low percentage of teenage users is noticeable for Facebook as recently millions of teens have stopped using the social networking site. It is also expected that millions more from the age group of 18-24 will leave the site in the coming years (Neal). The growth of the site might be increasing amongst the older generation but recent studies have also noticed and predicted a decrease in high school and college users over the next few years. This means that companies who want to reach out to these age groups will need to start finding another type of social media to reach them as the user base is decreasing on Facebook. The reasoning behind the younger generation leaving could be due to the fact that Facebook has an older population now. The younger generation would not want to use the same social site as their parents meaning that they will switch over to microblogging sites like Twitter or Snapchat instead. Even with the decrease of younger users overall Facebook has seen an increase in users overall. Facebook’s users are 53% female and 47% male meaning that Facebook is evenly split between genders for companies who need to reach out to both groups.

In 2014 Twitter had 271 million users. Out of these users, 35% were between the ages of 18-29, 20% were between the ages of 30-49, 11% were between the ages of 50-64, and 5% were aged
65+ (Brodzky). Many of the users on Twitter are younger which could be due to the fact that they are leaving or not even bother signing up for a Facebook account. When looking into Pew Research Center’s data on demographics it appears that the users on twitter can come from any background and anywhere. There showed no trends between Twitter users and education levels or household income. 18% of the users replied that they came from a Suburban area while 19% came from an urban area ("User Demographic Highlights From 5 Major - and Growing - Social networks"). On Twitter the average user is most likely going to be Black, Non-Hispanic (26%), next likely would be a Hispanic user at 19%, and finally a White user at 14%. It was also discovered that 32% of Twitter users have attended college or above while 15% of the users are in high school or below. While looking at income it seems that all levels of income are represented equally with Twitter. 17% of the users make more than $75,000, 14% make between $14,999 and $74,999, 16% make between $30,000 and $49,999, and 16% made less than $30,000 a year based off of household income (Widrich). Twitter is also used equally among users Worldwide. Looking at these demographic it is easy to see why so many companies are joining Twitter such as Cola and Pepsi. They can reach a wide variety of people in a short amount of time.

In 2014 LinkedIn had 300 million users. Out of these users, 15% were between the ages of 18-29, 27% were between the ages of 30-49, 24% were between the ages of 50-64, and 13% were aged 65+ (Brodzky). The older generation tends to be the dominate user group on LinkedIn due to the fact that this is marketed for professionals or younger users who are starting out in the workforce. LinkedIn has a very different purpose compared to Twitter and Facebook, LinkedIn is more professional than both of those sites and it is shown in the demographics that dominate the site. According to a report done by the Business Insider LinkedIn is actually more
popular among adults compared to Twitter. It also has a much higher percentage of users who have a college education. 38% of LinkedIn users have completed college and have a degree. 16% have had at least some college and only 12% are high school grads or less. Unlike Twitter though the users are not split evenly amongst women and men. Out of Internet users only 19% of females use LinkedIn while 24% of males use the site. While Twitter and Facebook are used the same worldwide LinkedIn has a higher percentage of its users in the United States (Guimares). This site is helpful not only for businesses and users who are trying to showcase themselves but for businesses and users trying to find a job. LinkedIn gives businesses a place to see the job history and skills and other connections to a potential employee to see if they will be a good fit for the company. Looking at what the user is following will also give the employer a chance to see how involved in various communities a new hire is. Businesses can be followed, they gain followers not only by popularity but by the information that they put out. Groups can also be created to help professionals out. Such as a Java group where Java developers can all communicate and help each other answer questions. By doing this the users can build connections and be seen by recruiters. It also gives them a chance to showcase themselves whether they are answering and showing their knowledge or asking and showing how they want to learn and the depth they have thought of the question.

Each site has its own unique demographic structure. Those who use Pinterest are mostly younger adult females from the ages of 18-29 who are white and have some degree of college education. Looking at this site it is easy to see how this could be the target group. The site has ‘boards’ targeted at women’s fashion, cooking, cleaning, and hair and beauty. Although it does have other boards for the users such as History and fitness many of the pins on the site target women. When searching on the sites Popular or everything boards the most common pins will be
‘girly’ quotes or women’s fashion. Even though there are many useful pins that can be used by any gender and any age group many who are not younger or female do not check out the site due to the stigma it has of being a site for younger women. This goes to show how a stigmas from demographics can arise and limit the website in terms of growth. If Pinterest wanted to attract a different audience they would have to change their marketing technique.

Google+, while not as popular as Facebook or other sites is still well known. It has around 300 million monthly active users who average about 7 minutes per a day on the site. This number is low compared to the 21 minutes spent on Facebook by the average Facebook user. Around 70% of the users on Google+ are male and single. If a company just looked at this data then they might cross Google+ off their list for social sites to use for advertising. Google+ users are not as many as Facebooks and they are not on as often. On top of that the users are not as diverse as those who use sites like Twitter or Facebook. Taking a deeper look into the demographics and statistics surrounding Google+ it has been shown that the brand posts on Google+ generated almost as much interaction as those that were posted on Facebook. Even though there are not as many users and they are not as diverse the posts made by brands are still generating responses. Between 2012 and 2013 Google+ grew as a whole by 33% and according to research done by SearchMetrics Google+ share will overshadow Facebook in 2016. The growth shown by Google+ might be due to changes that the site did to make its users use the site and join. For example, they integrated with YouTube comments and highly advertised the usage of Google+ to google users. Due to Google being a powerhouse many people felt they needed to join. However, these techniques could also help explain the imbalance amongst the demographics for Google+ compared to other social sites (Ganot). The users and site do have more of a professional feel to it though. Google+ doesn’t have the stigma that sites like Pinterest
and Instagram have meaning that with time they should increase the diversity of their users and even the overall user base. Google+ is fairly new compared to the other powerhouse social sites out there being only 3 years old. Currently not many companies are advertising or using Google+ as an option for marketing but if a company did get in and start building a fan base they would have an advantage as being one of the first to use it and they would not have much competition for the time being.

Overall 72% of all internet users are on social media and 71% of user's access social media from a mobile device. These numbers help explain why almost every site now has a 'follow us' or 'like us' button on the site. Consumers can now get to know a company on a more 'personal' level before they buy from them and businesses are taking advantage of this 'free' advertising. Social sites are not only for users to keep in touch with one another, they are used by businesses to promote their company and to find new talent. It is important to look into the demographics of social sites to see where a marketing division of a company should concentrate their efforts. It is also helpful for users to know so they can see which sites will be most likely to entice them and interest them. Many students in the Computer Science department and Information Systems department use a site called Reddit for entertainment and another site called stack overflow for programming help. While these sites have other uses, the main audience includes computer users due to the fact of how word spreads about less known sites.

Sometimes a social site can have wide differences in demographics for the same site. An example of this is a social site called Reddit which was launched in June 2005. Reddit has many subreddits that users can explore. These include things like World News to things like Shower thoughts or Dota2. While Reddit as a whole is made up of mainly younger men with 15% of internet users between the ages of 18-29 using the site compared to the 5% of females in the
same group the subreddits demographics vary greatly. Overall Reddit is compiled on mainly males from all income type backgrounds who have at least an undergraduate degree (Madrigal). The site has about 174 million unique monthly views and its users come from around 186 different countries. The site also has 8,193 subreddits of which all have their own unique demographics. For example, the users on Makeup Addiction are mainly younger females while the users for Over30Reddit are users over the age of 30 years and includes both females and males ("Reddit Demographics").

The popularity of social sites is also something that is important to consider. Currently it seems that out of the major social sites Twitter is the fastest growing site. The amount of times that we use social media is staggering. Many users have social media integrated with their daily lives now. Americans spend an average of 16 minutes an hour on social networking sites alone. This is compared to the average of 14 minutes per an hour for users in Australia and 13 minutes per an hour for the users in the U.K. (Morrison). Every time we go out to eat we can snap a picture of our food to share with friends on Instagram. We see that our friends have finally tried out that new theme park we mentioned so we can like their status update or post on Facebook. Find an interesting article on Google, why not like it or favorite it so you can look it up again later. Browsing 9Gag, make sure to give out a +1 to the posts that you like the most. Before we buy something we can now see where our product is coming from, if the company is a reliable one, and what others thought of the product when they bought it. Maybe they can even lead us to a newer or better product. All of these things combined help explain the over 5 million times that the Google +1 button is used or the 1 million web pages that now automatically connect to Facebook. It even helps explain why 47% of Americans alone say that Facebook is the number one influence on if they buy a product or not (Morrison).
Businesses and Leaders using Social Sites:

Businesses must also be included in the demographics when looking at social media. In today’s world, due to the fact that social sites have become such an integral part of our life businesses, their shareholders, and CEO’s must all take a part in social sites. It was in 2007 when the first example of the power that social sites could have over companies and shareholders really came to light. A stakeholder posted videos on YouTube and created a blog that talked about Yahoo’s business performance and what they thought the company was doing poorly. Soon enough the video gained traction and small investors of Yahoo, totaling up to about 2.6 million shares worth of investors, responded to the videos. This caused the chief executive at the time, Terry Semel, to step down (Levick). This shows the power that social sites can have. A single user on such a site can rally up thousands and change policies and even leadership. This is why it is important to have CEO’s of companies on social sites as well. With a presence on social sites CEO’s of companies can market themselves as respectful and powerful. They can show their knowledge and give insightful information to make their shareholders and other’s like and follow them. This not only helps secure their position but raised the image of the company and of the CEO themselves.

Today, 60% of U.S. investors state that social networking sites to help influence their decisions (Levick). On top of this shareholder activist interventions have increased by almost 90% globally from 2012 to 2013 (Coine). The reasoning behind this is that they are using social networking to see what their shareholders are talking about and what. They want to stay on the same page as those that are supporting them. They not only use social media to check up on the views of the shareholders, they also use it to reach out to them. Sites like us.proxyexchange.org helps to create online forums where shareholders can join voting blocs by transferring their
proxy-voting rights to other investors who have similar viewpoints. This allows them to have more of a voice in a company. There have also been movements on social media sites that have helped promote companies to change policies and procedures. One such example is the As You Sow campaign which was a grassroots imitative done with social sites to have Coco-Cola research the effects of chemicals on its aluminum cans. Companies can also use social media to help keep the shareholders updated on day to day information such as earnings calls and analysts meetings. Even though these types of tweets might not cater to everyone, it provides an easy format for shareholders to get a quick update on their company.

Not everybody thinks that the increased insight and use of social sites are helping companies though. By having shareholders who may not know the inside dealings of a company gain information some people think that this could hurt the company. If a company is being persuaded by shareholders who only have some information the company might not be able to deal with situations as it needs to grow. Also a single shareholder can attract many followers and persuade them to think a certain way. Such as the case with Carl Icahn below. The company also risks losing some control when they open themselves up to social media. Shareholders who might not have a lot of time to research could end up just following the crowd and going with choices that they do not fully understand or believe in. Others think that the increased insight it a good thing though. Letting the company have a watchdog to make sure that it doesn’t do any shady dealing that could hurt its public image. Considering the speed at which social sites work by a small mistake can easily be blown up. Also, when shareholders have more access and knowledge about the company they are more likely to invest more and have a higher interest and loyalty to the company. Due to the above reasons many companies now have a social media policy in place to help steer the direction of what is posted about them from their employees.
This is to help maintain an image of the company and make sure that important inside information is not leaked.

Carl Icahn, one of the wealthiest persons on Wall Street shows just how effective a tool Twitter can be. In less than one year he gained over 160,000 followers on Twitter and his tweets gain a lot of views and stir up activity. When he tweeted that he bought a large share of Apples stock because he thought it was undervalued the price of Apples stock jumped by 9 USD in less than 3 minutes. This shows how powerful a single person can be when they use Twitter effectively. These examples are not the only ones that show how powerful and how easily he can sway a crowd though. Regardless of Carl Icahn’s success in using social media sites like Twitter many companies do not use any social sites to connect to their shareholders unless there is first movement from the shareholders that force the companies hand to do so (Valsan).

CEO’s are also starting to take advantage of social media. When hiring or looking for a CEO for a company many people look at skills such as leadership, quick thinking, and knowledge in the subject. In today’s world of social media though it is also important that a CEO can use social media, even though social media has been around for a while, only a handful of CEO’s can effectively use this tool. CEO’s are often in the spotlight and in articles considering the decisions and choices that they have to make. Being in social media helps them seem more human and makes it easier for people to relate and connect to them. It also gives them a chance to explain themselves and talk to people who they normally would not have a chance to meet. All of these aspects make the CEO seem more trustworthy. A recent survey in Harvard Business Review tried to see what traits are commonly found in CEOs who use social media effectively. The list they came up with is that the CEOs who use social media are very curious, they want to know what others are thinking about the company and their competitors companies. They want
to know what the consumers want so that they can make the changes to fit those needs. They also must have a DIY mindset and be willing to look things up rather than having someone else look it up and tell them about it. They were also found to have a bias for action which is important in social media considering the speed at which things are sent and read and spread. The CEOs of social media will also always have an open mind and be willing to take in criticism and see the other side of an argument. This gives them the ability to changes others mind as well when they can recognize an idea that can be improved. The CEOs should also be the number one supporter of the brand. If the CEO of a company doesn’t think it is the best place to be then the company will lose support. If the boss doesn’t want the company or thinks that someplace else is better then why would customers want to go to their company instead of that competitor. The social CEOs will also be just that, social. They will want to connect with the people and talk to them rather than just promote their brand all of the time (Coine).

Any conversation that a CEO has on a social site is a global one reaching out to thousands of people. This is why it is important for the CEOs to consider who they want to reach. If they want to reach professionals only they should stick to sites like LinkedIn, if they want to reach an older generation Facebook would be a great choice, if they wanted to reach a wide variety of people they should go on Twitter which would reach the most people. They also have to consider the purposes and limitations of each site as well. While Twitter can reach the most people tweets are short and it can be hard to fit in a lot of information. Clever tweets can also be hard to think of. Facebook can hold more information and is a multimedia site but is more social compared to professional. YouTube is great for posting how to videos but might not be the best choice for posting speeches. Just like with businesses though CEOs have a high risk when they join social sites. These risks range from things such as nobody will follow them or they will say
things that are unpopular and boring to them having problems sharing information due to the nature of their company to the fact that they do not have the time to post consistently on such sites which will make them hard to gain popularity.

Microsoft is one company who has done well with keeping track of their consumers and shareholders globally with social media. Their IT leaders use analytical tools to monitor trending topics and use historical views and scorecards and KPIs to help them figure out what is going on in the world related to their company so that they can be ahead of the times. While most CEOs and companies might not spend so much time and effort there is a movement of companies heading in that direction. Urban Science is a global company that uses social media and social sites to help car companies to figure out what type of person is most likely to buy a vehicle. So while not all companies may do their own research there are companies who can be hired to research into social media. Such companies often use data mining techniques to gather data and present it in a reusable format.

When a company’s CEO starts to use social media it is most likely because the company itself already has social media usage within it. When this is the case the company will have policies on how its employees can act on social media. This can have both positive and negative side effects depending on the policies in place. Sometimes, employees can get frustrated if they are forced to use social sites which can lead to insincere posts or information spreading about the company.
DATA MINING WITH SOCIAL MEDIA

Data mining is a process of analyzing data from various perspectives and summarizing it into useful, readable information that can be used for various things such as cutting costs in a company to finding links between items that people buy. Data mining is a higher level technique that uses complex algorithms and other coding techniques to figure out links between factors. Many companies are now using some sort of data mining. Often the companies who are doing the most data mining and the most complex data mining are the larger ones who have the time, money, and infrastructure required to run the needed technology and configure it into presentable results. Recently the use of data mining has been increasing due to the drop in price for data storage making it possible for companies to create data warehouses which are needed to run and store the information for data mining. The reason why companies are so keen to use data mining is because it can help spot trends, relationships, patterns, and exceptions that might otherwise not be known. Some specific terms that often come up when discussing data mining include market segmentation, fraud detection, trend analysis, direct marketing, and interactive marketing. The availability of data mining has also allowed for new companies to open up who specialize in this technique and will then sell the information that they gather. Another name that is often used and associated with data mining is big data due to the amount of information that is involved in the process.

Many times social sites play an important role in data mining. They are information rich and hard to analyze due to the large amounts of data and internet speech that is used. Some of the problems with trying to mine data from social networks include the speed of the social data. When a company finally analyzes and gathers the data from social sites the data could be months old. The result is that companies marketing plans could fall behind the times. The multimedia
platforms of social media also cause some problems. It is difficult for companies to analyze all of the various types of data, videos, comments, pictures, and gathering the needed information out of these formats. The information that they could be looking for include email, address, age, gender, and preferences.

Information that is posted on social sites is public information meaning that anyone can use it. Companies like Rapleaf Inc. will collect and analyze and compile data on customers and then sell it to other companies so that those companies can learn about their consumers and be able to better target their audiences. Every time a user posts something that information will be gather and put into a profiler to analyze their behavior. The companies that sell this information help companies figure out who their best match is and how is most likely to buy. It is like a Match.com for businesses and consumers. It is not always just companies who but the information though, politicians and even non-profit group can use this information to find new customers or supporters or better target the existing group. The information that is sold about a user doesn’t always have a positive effect. For example, if a user went to apply for a credit card and many of their friends had poor credit scores then they could be associated with them and not receive as good as offer as they would have been if the company did not know this information beforehand (Betancourt).

One of the effects of data mining is personalizing advertisements for consumers. A great example of this is the advertisements that users see on Facebook when they log in. Each person has different advertisements on their pages that are customized for them. The advertisements show what they are most likely to be interested in and want to buy. Facebook isn’t the only site that customizes its advertisements or its consumers though. Target has been able to target expecting mothers based off their purchases from their stores and online. Getting these predictive
advertisements might not make everyone feel the most comfortable. Even though the companies are not breaking any laws some feel uneasy knowing that so much information can be gained about them and used to target them. It is not only social sites that gather user’s data. With the improvement of televisions many TVs can also be used to connect to social networks and are able to collect data on the people using them. DirecTV subscribers will find themselves watching different commercials based on the shows that they watch, their age, gender, location, and income. They try to have the most relevant ads for each subscriber, this way the subscriber will be more likely to go out and buy the product (Baker). This information is important to know and understand because data not all users realize that they choices they make are being recorded and sold and changing what they see. Corporations are making millions off of this information and these numbers are only increasing.

If a user wanted to protect themselves from their information being used and sold there are a few steps that they could take relating to social sites. They could change their privacy settings from public to private to limit the amount of information that is out there. If they do decided to stay public then they could make sure that the information that they are posting are consistent. They could also eliminate those people and other users who they do not need on their social networks to help improve their own image. If a user doesn’t personally know someone who is sending a friend request they should dig a little deeper and check out the user first to make sure that it is safe to accept the user. It only takes a few pieces of information for companies to match up consumers to their social media sites. One is the email which many users give out to sign up for sites or promotions.

Data mining doesn’t just gather information for companies to use for advertising though, although that is a big part of it. The data from data mining can be used for research purposes also.
For example, data from Facebook has been used to help study how parents and children interact with one another. The research, after analyzing 400,000 posts found out that children communications with their parents decreases from the age 13 on until they move out when it then starts to increase again (Jayson). There are legal issues that the companies must worry about when dealing with such sensitive personal information though. Security reasons are even one of the main reasons why users leave Facebook.
ODDS AND ENDS OF SOCIAL MEDIA

Social media isn’t always something big that spreads across the entire internet that all users are aware or have knowledge of. There are smaller parts and lesser known effects and types and usages of social sites. Google bombing and green IT and fundraising are some items out of many that relate to social sites in ways that many users do not think about in their daily lives.

Google Bombing

Google bombing is the practice of causing a web page to rank highly in search engines results for unrelated or off topic search terms by linking heavily. One example of this include the words ‘miserable failure’. When typing these words into Google users will get results leading to George W. Bush. There are also google bombs that have other effects such as Google not finding any results or asking if you meant something else. These Google bombs take advantage of search algorithms to change the results that come up on a page and are created for either comical or political results usually. They do have a link to social sites though. When a topic starts to gain popularity more and more people will start to search for such topic. The media can then use social sites to create a spin on what users search for. It can also be used to have sites publish information on a certain topic related to the keyword by popular demand. Users might not realize it when they are on sites like Facebook or Twitter but when they start following one of the leaders who are starting a google bomb they are helping with the creation also. The more popular the topic the more quickly it will spread. This can often been seen during times of political campaigns when parties will attempt to tie certain words to opponents. The more successful they are at having the public use these words the more likely the words will lead to a Google bomb.
Green IT

More and more people are becoming concerned with the environment everyday. Green IT is the practice of using green practices and resources in ways that help reduce energy and operating costs when relating to computers so that there are less harmful effects on the environment. Green IT has many connections to social sites. The two main connections are the wastes and costs that come from storing the information from the social sites and the second connection it the influence that social sites have over users to help change policies.

Social sites generate large amounts of data ranging from information on the users to images and videos. All of this data is kept and stored in data centers which, depending on the size of the social site, are large buildings filled with servers. These servers need to be kept in certain environments and use a lot of energy to run and maintain. To prevent overheating the rooms they are kept in must be cooled and the server need to draw power also. Green IT could be applied to these data centers by having green power run the servers, such as wind or solar energy, or by changing the server types to more efficient servers. The code written for social sites could be modified to make the sites run more efficiently and use less memory. Sometimes writing code in a different manner or using a different method can affect the speed and memory that the computer uses to run the code. Millions of users are using Facebook, if the developers found a way to make one section of their website go faster or use less memory that would affect millions of users and save many resources. Users can also use green IT practices to help lower their impact. One way they can do this is by switching to Wi-Fi when it is available. This will use less energy and power if the user is on their phone while on social sites.

The influence social sites have on users also plays a major part in green IT. Social media has the power to rally people together and has the influence to change the minds of its users. This
is one of the reasons why so many businesses and leaders are now using social media and investing money into figuring out how to use it more effectively. Advertisements are always telling users to get the newest product out on the market but if a movement started on how to save products and reuse them instead the amount of e-waste could decrease dramatically. If users were not pressured into buying the newest phone model or newest computer there would be a decrease in the harmful chemicals that come from e-waste which would be better for the environment. Also, if users started to spread the word about the harmful effects of wasteful usage of products and how users could more efficiently use their products, such as making sure they are on Wi-Fi, then the amount of waste would decrease greatly. Even if each users output only decrease marginally the overall effect from so many users would have a tremendous effect on the output.

Fundraising

Many types of fundraisers for various reasons have been started and been successful with the help of social sites. Local groups can use social sites to help gather support and money for their communities. They can gain the attention of people around them who may not know about an issue by posting and sharing images and information. With today’s technology it is easy for people to donate money to the cause and feel like they are helping. Some fundraisers are international and gain huge support with the help of social media. One such example is with the Japan's 2011 tsunami. Much of the fundraising was done with the help of social sites. The fundraising groups used the sites to spread images and pull at the heartstring of individuals. By showing the damage that was done and sharing stories of people who were affected many people felt like they could relate to what happened and wanted to help. They were able to donate money to the cause and find out other ways they could help by going to various social sites which would
give them the information that they needed if they wanted to help. Without the usage of social
media sites many people would not have known how to help or would have only donated if they
happened to come across someone who was asking for money at a booth at a reasonable location.
The social sites allowed people to be reached at any time and allowed them to help in their own
way at their own time increasing the amount of help that was given. Also, by seeing others help
and talk about the problem, it encouraged others to do the same knowing that everyone could see
them if they did not help. There are many smaller examples of social sites being used to provide
relief and support as well. It is not uncommon to see a story of a family who has fallen on hard
times and funds being raised for them. There are sites that will use PayPal so that people may
easily donate or put money into an account for someone else.
LITERATURE REVIEW

Visual analytic is a newer field of study that uses computer science along with visual interactive maps to help show and analyze big data. A lot of the data that is taken from social media is considered big data. One thing that all social media sites have in common is that users can form relationships and other types of connections such as a leader/follower. The type of data that can be gotten from social media that others can use includes using data to “track opinions about new products and services, fads and trends in popular culture... and different groups' consumption habits” (Schreck). Some of the problems that are faced with the data that is gotten from social media is the way that it is written, social media creates jargon and uses abbreviations frequently. For example LOL (laugh out loud), OMG (Oh my God), and IKR (I know right). Visual feedback of data from social media can help reduce the ambiguous messages and help set the scale of time and location of the messages (Schreck). Visual Analysis of Social Media Data looked into new methods to visually analyze data, one such way they did this was through “community provided photo collections, streaming news data, and georeferenced microblog data”. They conducted multiple experiments with this topic including an experiment to show how visual data, such as pictures, are more popular than words in social media. There was also an experiment that showed how many people are now streaming their news from social media sites. Due to the recent advances in technologies, scientist can more easily gather data from online sources. There are now tools that will compare documents for similarities and identify the common topics among the different pages, making them easier to group. In order for visual analytic to grow, system designers much work with making trade-offs between automatic analysis and manual interactive exploration (Schreck).
Social Media mining is a new field dealing with data mining and social media. Social media mining is “the process of representing, analyzing, and extracting actionable patterns from social media data” (Adedoyin-Olowe). Social media data has a few properties to it that make it different from other data. It is big, linked, noisy, unstructured, and incomplete. It is big in the sense that researchers do not usually care about the individual into into social media but rather the big idea that they are communicating about. It is linked due to all of the various relationships and types of social media and these links are not independent and identically distributed. The data is noisy meaning that there is a lot of information mixed in that researchers are not able to use. It is unstructured because of the language and all of the devices that can access and post to these social media sites. And finally, it is incomplete because of privacy settings that users can place on their data (Adedoyin-Olowe). Social correlation theory helps to explain correlations in behaviours in social media networks. “There are three types of objects in social media data – users, social relations and user generated content which allows us to roughly classify social media mining task to three groups based on the mining objects – user-based tasks, relation-based tasks and content-based tasks” (Adedoyin-Olowe). User related tasks include community detection, user classification, and social spammer detection. Social Theories in relation-related tasks include link prediction, social tie prediction, and tie strength prediction. Social Theories in Content-related tasks includes social recommendation and sentiment analysis. Feature Engineering, constraint generating, objective defining are algorithms that share things in common with social theories.

Social media has helped changed the way that people interact with each other. Cybercrimes have been increasing recently with the new opportunities that social site present to criminals. Phishing and social engineering are two types of cybercrimes. Phishing involves the
criminal sending out thousands or millions of emails in hopes of having a few of them return profitable results. This is similar to the many types of ‘Nigerian prince’ emails that are sent out claiming that someone is a prince from another country who needs some money but will repay the user once he comes to America. Social engineering is often used with social sites. This type of crime involves getting information from users by exploiting human psychology rather than hacking. An example is a friend on your network asks a user to send them money to help with a problem. Instead of sending money to a friend in need though the user actually sent money to a scam artist. Malware is also used often on social sites. Clicking on links or responding to certain messages can open a user up to viruses and malware. Many times users will not even realize that they have been affected or that something has been loaded onto their machines. Malware can be contacted in many ways, one such way is by clicking a link on a social site, such as Facebook, that leads to another site. The popups or links on this site could then give the user’s computer a virus. With all the social sites it can be easy for others to determine a user’s location which can then lead to criminal activities such as harassment. Researchers from the International Computer Science Institute tested the use of available internet resources to track a person’s location. In one of their experiments they were able to get the home address of a user from YouTube videos and then Google in less than 15 minutes. Identity theft and cyberstalking have increased with the help from social sites. Due to the ease of gaining information these types of crimes are increasing (Boone).

E-waste can be defined to include discarded parts of electronic devices which can include hazardous chemicals and it is becoming an increasing problem worldwide. “Green computing is the study and practice of designing, using, disposing, and manufacturing electronic components in an Eco-friendly manner” (Taruna). Green computing can be implemented at all parts of a
computer's life cycle. Steps can be taken during the manufacturing stage, during programming, and design phase. Currently, electronic products have a short lifecycle, products are having a shorter and shorter lifespan in many areas of technology and this means that the older products are being tossed at an accelerated rate. Part of this is due to the fact that replacing a product is cheaper than fixing the old product. The US environmental agency claims that about 75% of electronics that are not currently being used are being thrown out either in landfills or by being destroyed in other countries. They list out various solutions to elongate the lifespan of the electronic products such as donating or recycling them. They say that one million recycled laptops would save the energy equivalent to the electricity used by more than 3,500 US homes in a single year ("EPA"). Many developing countries will take the E-waste from developed countries and recycle the parts, this causes problems though as the parts are not properly taken apart and still release harmful chemicals to the environments (Taruna). In the US alone it was calculated that about 50-80% of the E-waste that should have been recycled was illegally exported to developing countries such as China. Even though China has tried putting up laws to stop this illegal importing, it is still a common occurrence. The same problem is happening in India. The reason why this is a major problem even with the laws that are in place in these countries is because it is cheaper for developing countries to dispose and recycle the waste. For example, it would cost the US 10 times as much to dispose of E-waste compared to any developing country. The developing countries are accepting this hazardous waste because the materials that they can extract, such as iron, gold, silicon, copper, and nickel can be sold at a profit (Taruna). Some of the solutions to reduce the amount of E-waste involve getting the people more aware and involved in what is happening around them. Schools can make Green IT classes mandatory and scholarships could be awarded to help spread awareness and have new
minds enter the field to think of solutions. The Government can put taxes on companies who produce more E-waste and give tax cuts to those who are Green (Taruna).
CONCLUSION

Social media is a part of today’s global world. It is used by multiple demographics all around the world. It has multiple purposes from entertainment to advertising to government. Despite its widespread usage though most people do not spare any thoughts for social media outside of how they use it. A businessman might think of it in terms of promoting his business and a teenager might think of it as a way to connect to friends on the fly but these various groups of users do not usually spare much thoughts about the implementations of what they are doing. The purpose of this paper is to show the many influences that social media has. A single user might not realize that by using social media they are part of something much bigger than their circle of friends. Such as how their data is being collected and used in advertisements that target them. Although there are papers that might talk about the usage of social media and green IT or research that covers data mining with the usage of social media there are not papers that combine all the influences of social media in one location. Papers on social sites and social media cover one area and do not link all the connections that social media has. This paper presents the various areas and topics that social media has influence over and helps show how they are all connected to one another.

The major implication of the usage of social media is not how people react with each other but how its usage is affecting and changing the world outside of the internet. Due to the influence that can be gained from social media laws have been modified and changed. Governments have went through revolutions and changed. The face of advertising has changed. With social media it has become easier to look up a company and see if it is trustworthy, social media has given people the power of a watchdog. It has given groups the power to spread the word about how to become greener.
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