**4 Useful Technologies Made Possible by Computers**

**Sri Lakshmi K B**

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People love to joke about disk drives that were once the size of washing machines. Except it’s not really a joke—it’s true. With a fresh coat of white paint, the RP04 disk drive could easily infiltrate any laundry room and blend right in. With a 92MB capacity, you could *almost* store the photos of your dinner you posted to Instagram last night.

Today, this technology once considered cutting-edge has become obsolete. Large, clunky, slow machines have been replaced with lightning fast, smart technology that does more than just sit in a corner and collect dust.

Here are four computer-based, cutting edge technologies you can’t live without:

**1. Thunderbolt**

If you’ve purchased or used a new Macbook Pro, you may have noticed the lack of familiar ports and the addition of a strange, new port called Thunderbolt 3. You may be wondering what Apple was thinking when they eliminated the standard USB port. This move, like many of Apple’s moves, has created frustration among users who just want to be able to plug in their USB devices without an adapter. But don’t get frustrated yet. There is a purpose to this future-forward move.

Thunderbolt 3 is a high bandwidth technology that operates at 40Gb/second, as opposed to the USB 3 you’re used to operating at just 5Gb/second. This means you can plug your smartphone into your Macbook and it will charge much faster than before. Gone are the days of waiting all night for your devices to charge via your computer’s USB port. But Thunderbolt 3 does more than just quickly charge your devices.

**Superior technology**

Thunderbolt 3 is a superior technology that leaves standard USB in the dust. With Thunderbolt 3, you can copy 14 hours of high definition video in less than a minute. You can also copy 25,000 photos or 10,000 songs in less than a minute. Thunderbolt 3 also connects to all displays and monitors using the standard DisplayPort and even Mini DisplayPort. And, by using an adaptor, Thunderbolt will support HDMI and VGA as well.

**2. Solid state hard drives**

For decades, most laptops and desktops came equipped with a traditional hard drive that spun, using an arm to access the data, much like a record player. At the time of its inception, this was the most practical way to store data when power to the unit was cut off.

A solid state hard drive serves the same function as a hard drive with moving parts, but operates differently by storing data on flash memory chips that retain their data, even when there’s no power. This is significant because it wasn’t previously easy to get memory chips to retain their data when the power supply was cut off. For example, RAM (random access memory) only stores data temporarily—when the power supply is cut off, all stored data is erased.

Although they’re a bit more expensive, solid state hard drives are much faster than their predecessors, allowing computers to boot up in less than a minute and sometimes even seconds. If you grew up with older technology running on operating systems like Windows 95 and 2000, you’ll appreciate this quick boot time.

Another benefit to solid state drives is they can’t become fragmented, meaning you won’t have to spend nights of torture defragmenting your hard drive. They’re also extremely durable.

Now that solid state drives have become mainstream, more computer manufacturers are offering new desktop and laptop computers that come with a solid state drive as a standard option. This means they’re becoming more affordable, which is great news for everyone.

**3. 3D printing**

The term “printing” has come to be associated with putting ink on paper—a seemingly 2D surface. However, technology has advanced to where 3D printing has become a huge trend. 3D printing is achieved with a computer program that allows you to create a 3D model of an object, and feed the data to a machine that constructs the model by compiling layers of melted plastic.

3D printing is not just limited to people who can afford expensive equipment. You can buy small 3D printers for your home computer that let you design 3D objects, and print them out right in your office.

Although 3D printing has fun uses, it also has practical uses. Among the most amazing things printed have been houses, actual train tracks, bridges, cars, and even body parts.

In 2014, a 3D printed roadster called the Strati was made onsite at the International Manufacturing Technology Show in Chicago, IL. This 3D printed car was so cool, Popular Mechanics took it for a test drive and gave it a great review.

**4. Smart objects for your home**

Smart objects in the home can be a luxury, but they can also be useful. Take the Kohler Numi toilet, for example. This is a toilet that has a motion-activated lid mechanism that allows you to open and close it without touching anything. With an air dryer, deodorizer, and heated seat, it’s definitely practical. To add luxury to practicality, this device comes with an MP3 docking station. This toilet could be a dream for germophobes.

**Lock your deadbolt remotely**

Another useful smart object is called Lockitron. This device fits over your deadbolt and allows you to operate your deadbolt from your smartphone. This device would be a perfect solution for AirBnB hosts who can’t always be present to deliver keys to their guests.

**Driverless cars**

The ultimate smart object that seems to outdo any other gadgets is the driverless car. At first glance, it may seem alarming to have an unmanned vehicle—something that can be very dangerous at high speeds—strolling down busy neighborhood streets. But when Google began testing its driverless electric cars in Mountain View, CA, they discovered they are actually pretty safe. Possibly even safer than cars with human drivers.

The important question is if driverless cars are safer for pedestrians and cyclists, two road hazards human drivers often have a difficult time seeing. The answer appears to be yes—driverless cars seem to be safer for pedestrians and cyclists because they’re programmed to perceive surroundings as predictable data.

In fact, during one test drive, a driverless car was able to perceive a pedestrian about to step into the street and the car hesitated to make sure the person didn’t start crossing the street before turning.

**The future of technology is unlimited**

Twenty years ago, it wasn’t likely that anyone was thinking about connecting an MP3 player to their toilet. It’s somewhat of an unnecessary luxury, but the fact that it’s possible is a great indication of where technology is headed.

If a fully functioning car can be printed from plans created in a computer program, the height of what can be achieved with computers is only limited to what we can create in our minds. As Napoleon Hill said, “whatever the mind can conceive and believe, the mind can achieve.”

**Applications of Artificial Intelligence in Use Today**

**Mrs. KALAISELVI**

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Beyond our quantum-computing conundrum, today's so-called A.I. systems are merely advanced machine learning software with extensive behavioral algorithms that adapt themselves to our likes and dislikes. While extremely useful, these machines aren't getting smarter in the existential sense, but they are improving their [skills](https://www.wanderlustworker.com/the-7-best-skills-you-can-learn-online/) and usefulness based on a large dataset. These are some of the most popular examples of artificial intelligence that's being used today.

**#1 -- Siri**

Everyone is familiar with Apple's personal assistant, [Siri](http://www.apple.com/ios/siri/" \t "_blank). She's the friendly voice-activated computer that we interact with on a daily basis. She helps us find information, gives us directions, add events to our calendars, helps us send messages and so on. Siri is a pseudo-intelligent digital personal assistant. She uses machine-learning technology to get smarter and better able to predict and understand our natural-language questions and requests.

**#2 -- Alexa**

Alexa's rise to become the smart home's hub, has been somewhat meteoric. When Amazon first introduced Alexa, it took much of the world by storm. However, it's usefulness and its uncanny ability to decipher speech from anywhere in the room has made it a revolutionary product that can help us scour the web for information, shop, schedule appointments, set alarms and a million other things, but also help power our smart homes and be a conduit for those that might have limited mobility.

**#3 -- Tesla**

If you don't own a [Tesla](https://www.tesla.com/), you have no idea what you're missing. This is quite possibly one of the best cars ever made. Not only for the fact that it's received so many accolades, but because of its predictive capabilities, self-driving features and sheer technological "coolness." Anyone that's into technology and cars needs to own a Tesla, and these vehicles are only getting smarter and smarter thanks to their over-the-air updates.

**#4 -- Cogito**

Originally co-founded by CEO, Joshua Feast and, Dr. Sandy Pentland, [Cogito](http://www.cogitocorp.com/) is quite possibly one of the most powerful examples of behavioral adaptation to improve the emotional intelligence of customer support representatives that exists on the market today. The company is a fusion of machine learning and behavioral science to improve the customer interaction for phone professionals. This applies to millions upon millions of voice calls that are occurring on a daily basis.

**#5 -- Boxever**

[Boxever](http://www.boxever.com/), co-founded by CEO, Dave O’Flanagan, is a company that leans heavily on machine learning to improve the customer's experience in the travel industry and deliver 'micro-moments,' or experiences that delight the customers along the way. It's through machine learning and the usage of A.I. that the company has dominated the playing field, helping its customers to find new ways to engage their clients in their travel journeys.

**#6 -- John Paul**

[John Paul](https://www.johnpaul.com/uk_en), a [highly-esteemed luxury travel concierge company](http://www.forbes.com/sites/robertadams/2016/11/14/10-best-luxury-concierge-companies-in-the-world/) helmed by its astute founder, David Amsellem, is another powerful example of potent A.I. in the predictive algorithms for existing-client interactions, able to understand and know their desires and needs on an acute level. The company powers the concierge services for millions of customers through the world's largest companies such as VISA, Orange and Air France, and was recently acquired by Accor Hotels.

**#7 - Amazon.com**

[Amazon's](https://www.amazon.com/) transactional A.I. is something that's been in existence for quite some time, allowing it to [make astronomical amounts of money online](https://www.wanderlustworker.com/how-to-make-money-online-the-definitive-guide/). With its algorithms refined more and more with each passing year, the company has gotten acutely smart at predicting just what we're interested in purchasing based on our online behavior. While Amazon plans to ship products to us before we even know we need them, it hasn't quite gotten there yet. But it's most certainly on its horizons.

**#8 -- Neflix**

[Netflix](https://www.netflix.com/) provides highly accurate predictive technology based on customer's reactions to films. It analyzes billions of records to suggest films that you might like based on your previous reactions and choices of films. This tech is getting smarter and smarter by the year as the dataset grows. However, the tech's only drawback is that most small-labeled movies go unnoticed while big-named movies grow and balloon on the platform.

**#9 -- Pandora**

[Pandora's](http://www.pandora.com/) A.I. is quite possibly one of the most revolutionary techs that exists out there today. They call it their musical DNA. Based on 400 musical characteristics, each song is first manually analyzed by a team of professional musicians based on these criteria, and the system has an incredible track record for recommending songs that would otherwise go unnoticed but that people inherently love.

**#10 -- Nest**

Most everyone is familiar with Nest, the learning thermostat that was acquired by Google in January of 2014 for $3.2 billion. The [Nest](https://nest.com/) learning thermostat, which, by the way, can now be voice-controlled by Alexa, uses behavioral algorithms to predictively learn from your heating and cooling needs, thus anticipating and adjusting the temperature in your home or office based on your own personal needs, and also now includes a suite of other products such as the Nest cameras.

**Computers: the future beyond**

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Today s generation could never ever imagine in their wildest dreams about the world, ages before, when there were no computers or any other technologies. So much we have advanced that now every information is just a click away and is in your hands 24/7. All this advancement was possible only with the introduction of a small device called the Computer.

The computer is the most wonderful gift of science to the modern man. The computer can do all the works of man. Thus, after the invention of computer, the gap between man and machine has been bridged up.

As a discipline, computer science spans a range of topics from theoretical studies of algorithms and the limits of computation to the practical issues of implementing computing systems in hardware and software. CSAB\_(professional organization)"CSAB, formerly called Computing Sciences Accreditation Board which is made up of representatives of the Association for Computing Machinery(ACM), and the IEEE Computer Society(IEEE CS) identifies four areas that it considers crucial to the discipline of computer science: theory of computation, algorithms and data structures, programming methodology and languages, and computer elements and architecture.

According to PeterDenning, the fundamental question underlying computer science is, "What can be (efficiently) automated? Theory of computation is focused on answering fundamental questions about what can be computed and what amount of resources are required to perform those computations. In an effort to answer the first question, computability theory examines which computational problems are solvable on various theoretical models of computation. The second question is addressed by computational complexity theory, which studies the time and space costs associated with different approaches to solving a multitude of computational problems.

The education field has changed in many ways today. Almost every student wants a computer, whether it is at home or at school. They also demand the use of the Internet, as they say they can access information online for homework as well as projects. This is something that has changed the way students study around the world. It has made things easier for them, as they can access all the information they want for any tests they are preparing for as well.

The original objective for inventing the computer was to create a fast calculating machine, though today it is used for other purposes. Computer is something more than a calculating device only. It plays vital role in sending cosmonauts to the space and to the moon. Courses in computer technology have been introduced in colleges and universities because of the growing importance of computer.

Computers have become an integral part of the education field, and they contribute largely to the same. The other advantage of computers is the fact that they are very cheap today. Thus, any student can afford to buy this, for the help of their education.

The device introduced in 18 century, are sold like candies in this 21st century.

People are more depended on this device which is known to us in the name of computer....

**Code Division Multiple Access (CDMA)**

**Dr. Susil Kumar Sahoo**,

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Code Division Multiple Access (CDMA) is a digital technique for sharing the frequency spectrum. Multiple users are assigned radio resources using spread Spectrum techniques. Although all users are transmitting in the same RF band, individual users are separated from each other via the use of orthogonal codes. CDMA is based on proven Spread Spectrum communications technology.

There are several CDMA implementations that are currently deployed or under development. The first commercial and most widely deployed CDMA implementation is CDMAOne.

CDMA is an advance digital technology that can offer 7 to 10 times the capacity of analog technologies and up to 6 times the capacity of digital technologies such as TDMA.

The speech quality provided by the CDMA systems is far superior to any other digital technology particularly in difficult radio environments such as dense urban areas and mountainous regions. It provides the most cost effective solution for cellular operators.

CDMA Technology is constantly evolving to offer customers new advanced services. The mobile data speeds offered through CDMA phones are increasing and new voice codes provide speech quality close to wire line. Internet access is now available through CDMA terminals. The CDMA systems and technology have been standardized under Interim standard-95 (IS-95 A&B).

#### CDMAOne

The foundation of CDMAOne is the TIA/EIA IS-95 standard. The term CDMAOne is intended to represent the end-to-end wireless system and all the necessary specifications that govern its operation.

CDMAOne technology provides a family of related services including cellular, PCS, and fixed wireless (Wireless Local Loop). CDMAOneTM is a trademark of the CDMA Development Group (CDG).

* **CDMA2000**

CDMA2000 is an improvement on TIA/EIA IS-95. It provides a significant improvement in voice capacity and expanded data capability, and is backward-compatible with IS-95 handsets.

**Amazing & Interesting facts**

Student-Mohammed Nadeem

2ndyear-III sem (BCA ‘B’)

* Only about 10% of the world’s currency is physical money, the rest only exists on computers.

✓ If there was a computer as powerful as the human brain, it would be able to do 38 thousand trillion operations per second and hold more than 3580 terabytes of memory.

✓ The password for the computer controls of nuclear tipped missiles of the U.S was 00000000 for eight years.

✓ Approximately 70% of virus writers are said to work under contract for organized crime syndicates.

✓ An average person normally blinks 20 times a minute, but when using a computer he/she blinks only 7 times a minute.

✓ The first ever hard disk drive was made in 1979, and could hold only 5MB of data.

✓ The first 1GB hard disk drive was announced in 1980 which weighed about 550 pounds, and had a price tag of $40,000.

✓ More than 80% of the emails sent daily are spams.

✓ The original name of windows was Interface Manager.

✓ The first microprocessor created by Intel was the 4004. It was designed for a calculator, and in that time nobody imagined where it would lead.

✓ IBM 5120 from 1980 was the heaviest desktop computer ever made. It weighed about 105 pounds, not including the 130 pounds external floppy drive.

**My Marks Just Screwed Up**

Student-Mohammed Nadeem

2ndyear-III sem (BCA ‘B’)

My marks just screwed up. Not that

Its anyone else's fault. Okay, yeah,

getting down to it, it is always that I

could have put in more effort.

But the whole shit about this thing is

that I never wanted this kind of life;

especially after the gruel some top exams

Well, why does there have to be

someone at top of you? And why

exactly do you have to run up to

him....I mean, let us think rationally.

No one's a God out here. We were

never meant to be perfect. We may

just be test samples in this huge

experiment done by God. And the

ultimate aim is to learn to live with

your disparities between your real

and model self.

So why not just sit back and relax, ole

friend. Enjoy, think, contemplate and

end it all with a laugh. Don't worry,

you as your distinct. Personality won't

get a second chance.

And again far in the distance you see

that mule whizzing after some God-

damned (created?) mirage.

So???? Hey, pack up, leave. Be on

your two quick, who knows what

treasure that mule is running after.

You find yourself rushing in and how!

There's a whole torrent running

around you and suddenly you are

caught again…You panic, look

around just to find similar white faces

staring back at you. You can see the

same senseless modern art painted

inside everyone. The individual

thinks it as something spectacular:-

complex and sophisticated. And yeah,

the reality is that it is just the same

splash of colors.

Now you are sick and you want to get

away. However, deary, you can't stop.

The race is hot and you are a part of it.

And what we need to do is to take a

break from the continuous running

around. Just take a chill once and

observe....

Observe from as far as to what’s

happening and where is it leading to.

What’s the purpose and what’s the

end. What happens is that once drawn

in the vicarious circle one only keeps

getting further entangled. Our life

isn't just a computer loop which will

keep executing again and again. It’s a

precious one-time gift. Sometimes all

one has got to do is decide what to do

With the time that is given to us.

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**Hacking**

Mrs. Shubhi Srivastava

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Hacking was a term that originated in 1990s and is associated with the unauthorized use of computer and network resources. By definition, hacking is the practice of altering the features of a system, to accomplish a goal which is not in scope of the purpose of its creation.

Hacking is more commonly used in context of “Computer Hacking” where threat is posed to security of the computer and other resources. In addition, hacking has few other forms which are less known and talked about .e.g. brain hacking, phone hacking etc.

“**Hacker**” was a term used to denote a skilled programmer who had competency in machine code and operating systems. Such individuals were proficient in solving unsatisfactory problems and often interpreted competitors’ code to work as intelligence agents for small software companies.

But currently, hacking has a more negative implication and so is the term hacker. Hacking which is done on request and involves a contract of terms and conditions allows authorized access to the target and hence referred to as ethical hacking.

Computer and network security come under the foray when the information about possible attacks is tried to be evaluated to determine the weaknesses and loopholes in the system. Poor web-configurations, old or loosely bind software, inactive or disabled security controls and weak or low-strength passwords are some examples of areas that make computer networks and systems vulnerable to attacks. Ethical hacking involves identification of all or any such possible areas based on the suggested terms in the contract and the level of access given.

Eric Raymond has a better definition to hacking in his compilation ‘The New Hacker’s Dictionary’ as: A “good hack” is a clever solution to a programming solution and “hacking” is the act of doing it. Ethical hacking helps the organization better protect its system and information and is seen as part of an organization’s overall security efforts.

Hackers could aim to steal company’s valuable information and also render harm the intellectual property and other sensitive information. Companies may also run into the trouble of facing potential lawsuits if hackers steal customer information by getting into their systems.

Ethical hacking is a way to check such thefts and make information less vulnerable to outside malicious hackers.

Such hackers take opportunity in assisting corporate with their abilities and help find flaws in security system of the computer and do not intend to harm others.

Innumerable hackers attack the computer systems security by means of viruses, worms, exploits etc.

**Life is a code**

Karan prajapati

Student: BCA 'B'(III sem)

Life is a code

It's within us and outside of us.

Above us and below us.

We're one of a collective consciousness

As one giant code.

Our codes are like butterfly affects that ripples away thru the fabric of reality that loads...

We're like electricity that powers the circuit boards.

We're like an ip address that connects thru the gateway that glows.

We're interconnected as one as the energy flows.

Our functions are like c codes, like our genetic code.

We're programmers of our reality that select stars where the thought goes..

Our limitation is our perception of the code.

Our friends are like classes of our codes.

Our mistakes are part of the system that manipulates our codes.

Some exceptions are caught by our download...

When zero's and ones are connected we give birth to a new code.

When the program completes its self, it's time to go.

But some of us might exit and some of us will just reload............

**Article on Mainframe**

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A term originally referring to the cabinet containing the central processor unit or "main frame" of a room-filling [Stone Age](http://encyclopedia2.thefreedictionary.com/Stone+Age) batch machine. After the emergence of smaller "[minicomputer](http://encyclopedia2.thefreedictionary.com/minicomputer)" designs in the early 1970s, the traditional [big iron](http://encyclopedia2.thefreedictionary.com/big+iron) machines were described as "mainframe computers" and eventually just as mainframes. The term carries the connotation of a machine designed for batch rather than interactive use, though possibly with an interactive [time-sharing](http://encyclopedia2.thefreedictionary.com/time-sharing) operating system retrofitted onto it; it is especially used of machines built by [IBM](http://encyclopedia2.thefreedictionary.com/IBM), [Unisys](http://encyclopedia2.thefreedictionary.com/Unisys) and the other great dinosaurs surviving from computing's [Stone Age](http://encyclopedia2.thefreedictionary.com/Stone+Age).  
  
  
Supporters claim that mainframes still house 90% of the data major businesses rely on for mission-critical applications, attributing this to their superior performance, reliability, scalability, and security compared to microprocessors.

For decades, IBM was the dominant vendor in the mainframe business. Although many tried to compete by offering compatible machines, they no longer do . HP, Unisys, Sun and others make machines that compete with IBM mainframes in many industries but are mostly referred to as servers. In addition, non-IBM mainframe datacenters have hundreds and thousands of servers, whereas IBM mainframe datacenters have only a few machines.

Although the mainframe is often viewed as a legacy platform, mainframe systems still occupy a significant place in the data centers of many organizations. Furthermore, although mainframe price/performance continues to improve year to year, mainframes remain a big-ticket investment. Therefore, proper management of mainframe utilization is an important part of data center planning.

Mainframe capacity planning is a balancing act. Too much utilization during peak periods can create CPU bottlenecks, resulting in slowed response time or late completion of batch processing. Under-utilization, on the other hand, means that the organization is spending more on mainframe capacity than is warranted by the organization's computing workload. Furthermore, oversized mainframes drive other costs in the data center. For example, mainframe software is largely based on installed MIPS; the more MIPS, the higher the license and maintenance fee for mainframe software. Larger mainframes also consume more power and require more cooling. Therefore, properly sizing mainframe capacity is a key to keeping data center costs under control.

**Software Agent**

Mrs. Vinita Tapaskar

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Software Agents are an innovative technology designed to support the development of complex, distributed, heterogeneous information system. Agent oriented software engineering methodology is used to incorporate software agents into systems. This field is motivated by two research fields’ software engineering and Artificial Intelligence. Agent-oriented software’s are being largely accepted into the various software design areas in the IT industry. Most application developed now are distributed and web based incorporating intelligence through agent will ease the development process

Agent Oriented Software Engineering provides the developer the path to structure their applications using autonomous, communicative elements which are nothing but software agents.

AOSE methodology can be defined as economical process of development software where agent is used as key element. Developing software involves the phases from understanding the problem, requirements analysis, architecture design and implementation. In traditional development of projects the components or objects provide the business functionality.

But this approach of Software Development faces the challenges with distributed, complex and open systems. In distributed systems it is difficult to trace the single point of control because the objects are distributed. To overcome this difficulty the components must be capable of automatically interacting with each other and performing the required functionality as user needs it. Some Artificial Intelligence must be brought into the components of software.

AOSE provides such intelligence through agents. Agent may perform the tasks individually. In Complex and distributed system, Agents can be used to monitor the interaction among components particularly when human interaction is unavailable.



Agent Features

Agents have following properties broadly shown in Figure 3.2 to work on distributed or complex system intelligently:

* Persistence: The component code will be active and will decide on its own when to execute the code based on the demand.
* Autonomy: Agents have decision making capability. They can do selection, prioritization on behalf of user.
* Social ability: Multiple agents may work in collaboration with each other. They can communicate with each other to perform the given task.
* Reactivity: Agents can respond and react to the external environmental changes

WannaCry

KARAN PRAJAPATI

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Wanna Decryptor, also known as WannaCry or wcry, is a specific ransomware program that locks all the data on a computer system and leaves the user with only two files: instructions on what to do next and the Wanna Decryptor program itself.

When the software is opened it tells computer users that their files have been encryted, and gives them a few days to pay up, warning that their files will otherwise be deleted. It demands payment in Bitcoin, gives instructions on how to buy it, and provides a Bitcoin address to send it to.

Most computer security companies have ransomware decryption tools that can bypass the software.

It was used in a major cyber attack that affected organisations across the world including the NHS and Telefonica in Spain.

How does WannaCry work?

WannaCry works by encrypting data on a computer that has been infected and then tells the user that their files have been locked and displays information on how much is to be paid and when payment is taken through Bitcoin(a payment medium).

Is your computer vulnerable?

If you are running an older version of Windows that is no longer supported by Microsoft, you will be vulnerable to WannaCry, according to Microsoft’s blog. This includes Windows 8 and Windows XP which the majority of NHS England trusts are using.

But if you are using Windows 10 or any of the other version such as Windows Vista, Windows 7 and Windows 8.1 systems, you’ll be protected as long as your automatic updates are enabled

**Poem**

KARAN PRAJAPATI

Student-BCA 'B' (III sem)

We are CHEATERS, but don't cheat HUMANITY...

We hate STUDY, but we love TECHNOLOGY....

We FLIRT the flirts, but we are TRUE LOVERS....

We don't have BOOKS in hand, but we have revolutionary

IDEAS

in mind....

World CAN'T change us , but we CAN change the world....

We are one of the common race on Earth....

Meet us , we are the .

**SOCIAL MEDIA ADDICT**

Student-PARVEZ PASHA(1st Sem, BCA ‘B’)

You don’t limit your life to social media.

In Reality, social media limits you to your life.

A selfie with this and a selfie with that.

Your life is a race for comments and likes.

Instead of having a personality worth praising.

You are now judged based on your social media profiles.

Your achievements are unlocking new levels of Candy Crush,

Is that the legacy you’ll leave behind?

You buy everything from behind the screen,

Error 404: Cannot buy Love and Time.

You don’t limit your life to social media.

In reality, social media limits you to your life.

**TROUBLE IN MY PC**   Student: Mallikarjuna (BCA ‘B’3rd sem)

That personal computer on the table  
With lots of connection cable,  
Think so it has some trouble

Sure to clear it with my skill  
There is a program search call  
Time has passed no access still.

What the thing has happened  
Is that computer has hanged!?

What to do? How to do?

Dash the keys on the board  
Start doing it now dude.

'Ecp' Or ' Alt' If not 'Del'  
Whatever been but result has not seen,  
Running no functions, no programme  
But only the black monitor screen

Is the copies of it files,  
Backups in memory spaces.  
Erase all the trash,  
Click for a refresh  
Switch out off or shut  off  
By the control of mouse  
Nothing to worry just change the OS..

**VISUAL CRYPTOGRAPHY**

**Mrs. Sajana Balan**

**Assistant Professor (MCA)**

Cryptography

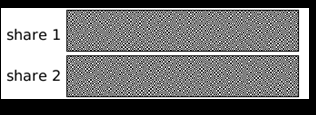
* The art of protecting information by transforming it (*encrypting*) into an unreadable format, called cipher text. Only those who possess a secret *key* can decipher (*decrypt*) the message into the original text.
* The term cryptography has its origin from two Greek words “*kryptos*” meaning secret and “*graphia*” meaning writing. Thus cryptography is the art of secret writing.

Cryptography Terminology

* Plain text: The original message which is in human readable form eg : hello
* Cipher text: The converted non readable form of information eg:ifmmp
* Key: The secret information to convert plain text to cipher text and vice versa eg : each letter in the plain text is replaced by the next letter in the alphabetic order in the above example.
* Encryption : The process of converting plain text to cipher text using the key.
* Decryption : The process of converting cipher text to plain text using the key

Visual Cryptography

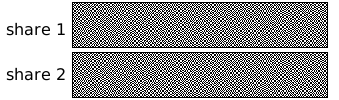
* Visual cryptography is a cryptographic technique which allows visual information (pictures, text, etc.) to be encrypted in such a way that decryption becomes a mechanical operation that does not require a computer
* It was developed by Moni Nor and Adi Shamir in 1994.
* It is a visual secret sharing scheme, where an image is broken up into n shares so that only someone with all n shares could decrypt the image, while any n − 1 shares reveal no information about the original image. When all n shares are overlaid, the original image will appear.











In this example, the image has been split into two component images. Each component image has a pair of pixels for every pixel in the original image.

These pixel pairs are shaded black or white according to the following rule:

(a)if the original image pixel was black, the pixel pairs in the component images must be **complimentary;** randomly shade one ■□, and the other □■. When these complementary pairs are overlapped, they will appear dark grey(black).

(b) if the original image pixel was white, the pixel pairs in the component images must **match**: both ■□ or both □■. When these matching pairs are overlapped, they will appear light grey(white).

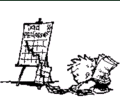
So, when the two component images are superimposed, the original image appears

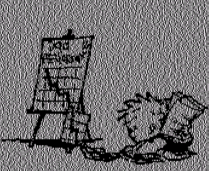
Visual Cryptography Algorithms

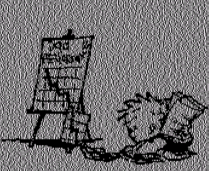
* Two out of Two Halftone Visual Cryptography
* Three out of Three Halftone Visual Cryptography
* Block Based Symmetry Key Visual Cryptography

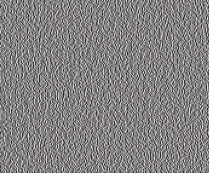
Two out of Two Halftone Visual Cryptography

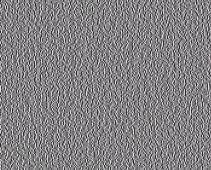
**Let’s take an example of a black and white image where the information is in black and empty space is represented by white.**

Secret Image

 Halftone image

 Halftone image

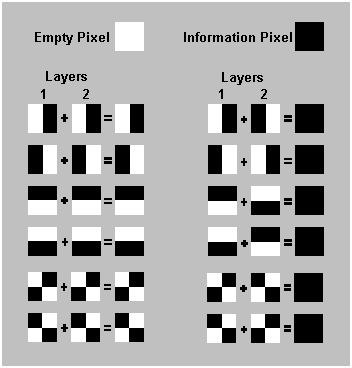
 Share 1

 Share 2

Combining the two shares reveal the halftone image

Considering the above example:

* the continuous image is converted to half tone
* There are two component images(shares) for the halftone image
* Each pixel of the half tone image is mapped to a 2x2 matrix
* Thus each pixel is divided into 4 subpixels



**In the table , we can see that a pixel, divided into four parts, can have six different states.**

**If a pixel on layer (share) 1 has a given state, the pixel on layer(share) 2 may have one of two states: identical or inverted to the pixel of layer 1.**

**If the pixel of layer 2 is identical to layer 1, the overlayed pixel will be half black and half white. Such overlayed pixel will be light grey . This is an empty pixel.**

**If the pixels of layers 1 and 2 are inverted or opposite, the overlayed version will be completely black. This is an information pixel.**



Horizontal Shares Vertical Shares Diagonal Shares

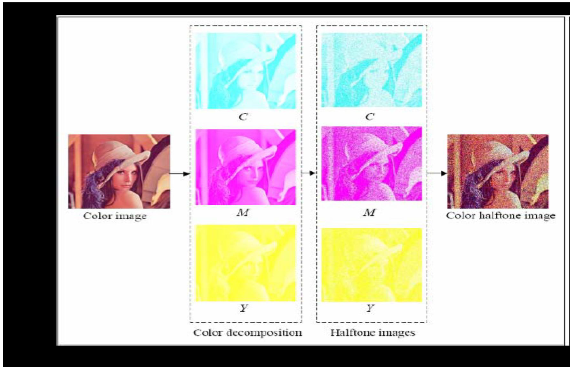
**COLOUR VISUAL CRYPTOGRAPHY**

The colour image is separated into cyan, magenta and yellow.

Then the halftone technique is used to translate the three color images into the respective halftone images.

* Two out of two visual cryptography scheme will be performed on these halftone images

Finally, by combining the above images, a color halftone image can be generated.



Applications of Visual Cryptography

* Biometric Security: for user authentication
* Banking : for signature verification
* Steganography: to conceal information

**Is Current Technology Giving You Anxiety?**

Mr. Amith B N

Asst Prof (Computer Science & Applications)

New technology is exciting, and we’ve gotten used to it permeating our daily lives. We’re more connected and more informed than ever before, but does our new technology come with a downside?

**Anxiety and Depression**

Chances are, you’ve experienced at least some degree of anxiety or depression in coordination with your use of technologies like social media, and the internet in general (whether you realize it or not). On a large scale, technology is [making us more disconnected](https://www.psychologytoday.com/blog/the-power-prime/200907/technology-disconnectivity-anxiety), prompting feelings of anxiety that weren’t there before and making us feel sad and negative.

But why is this case?

* **Instant responses.**When you send an email, or post on someone’s social media feed, they receive a response instantly. Social connections, from friends and family members to coworkers, now function 24-7. When you send someone a message and they don’t respond right away, you tend to feel a tinge of anxiety. When you receive a message and you know the sender has seen you read it, you feel a tinge of anxiety as well. These feelings add up and constitute a world that demands constant socializing and attention.
* **New social dynamics.** On top of that, social media is not a suitable substitute for real human interactions—[yet that’s how we’re using it](http://www.huffingtonpost.com/2012/07/10/social-media-anxiety_n_1662224.html). Some forms of social media use are actually beneficial, such as keeping in touch with friends who live far away or sharing particularly special moments with a large audience, but the public and fleeting nature of interactions here is far less intimate, and less rewarding in the long term than a conventional mode of socialization.
* **Overabundant information.** There are many advantages to how much information we have access to, and how much we’re exposed to on a daily basis. In a matter of seconds, you can look up almost any fact you desire, and catch up on the latest news. However, as you’ve undoubtedly noticed, many headlines are negative, and the[media skews toward bad news](http://www.bbc.com/future/story/20140728-why-is-all-the-news-bad). Your brain, upon reading all this negative information, can go into information overload, causing you to think more negatively about the current events of the world. Is it better to be ignorant and happier? There are arguments on both sides of the equation, but either way, the overabundance of information is sparking trends of depression. These are just three of the ways that technology can incubate or exacerbate anxiety and depression.

**Overcoming Tech Anxiety**

So what can we do about this? The answer certainly isn’t to cut technology out of our lives entirely, but we can use these strategies to use technology more responsibly and improve our mental health:

* **Get plenty of sleep.** [Anxiety and healthy sleep have an inverse relationship](https://www.snorenation.com/help-anxiety-sleep-loss/); the more anxious you feel, the less likely you’ll be to get a good night’s sleep, and the less sleep you get, the more prone you’ll be to anxiety. Don’t stay up late at night scrolling on your smartphone; instead, go to bed early, create a suitable environment for yourself, and try to maintain a consistent schedule.
* **Disconnect**. Go on a technology “diet,” restricting your activity to a bare minimum for a stretch of several days. It’s a way to re-teach yourself to be less dependent on your apps and devices. With less overall exposure, you’ll be less susceptible to the negative mental effects of technology.
* **Maintain and find new real-life relationships.** Instead of managing your relationships on social media, work to preserve them in the real world. Get dinner. Go have coffee. Attend mixer and networking events, and try to meet new people. The more you engage with others in real life, the more you’ll realize how insufficient social media is at fulfilling your social needs.
* **Find healthier outlets for stress.** When you get stressed for a moment at work, do you ever log into social media to check your newsfeed?[Pew Research shows](http://www.pewinternet.org/2016/06/22/social-media-and-the-workplace/) 34 percent of American workers do the same, with another 27 percent using social media to connect with loved ones as a distraction from work.