Empowering Women Since 1927...

HANS RAJ MAHILA MAHA VIDYALAYA

JALANDHAR (PUNJAB) INDIA

Volume 8 (2022-23)

TECHWATCH

COMPUTER SCIENCE

Celebrating the Centennial Decade 97 1927 - 2027 YEARS OF EXCELLENCE

College of Excellence by UGC | Kaushal Kendra by UGC | Star Scheme College | Reaccredited by NAAC in 3rd Cycle A++ Highest Score Nationwide | College with Four Gold Star Ranking by | Excellence in Institutional Social Responsibility FICCI | Excellence in Serving for Social Cause ASSOCHAM

Ph: 0181-2253710, 2204198, E-mail: hmv_jal@yahoo.co.in, Web: www.hrmmv.org

Download HMV NEWS Mobile app from Playstore

INDEX

S.No.	Content	Pg. No..
1	Principal's Message.	3
2	HOD's Message.	4
3	Editor's Message	5
4	Co-Editor's Message	6
5	Student Editor's Message	7
6	Virtualization.	8
7	Quantum Computers.	10
8	Network Security.	13
9	Latest Operating System.	15
10	Health IT.	18
11	Firewall.	20
12	Electronic Information Security.	22
13	Intelligent Video Analytics.	24
14	Machine Learning.	26
15	Internet privacy.	28
16	Artificial intelligent.	31
17	Mobile.	33
18	Video surveillance.	35
19	Career In Information Technology.	37
20	Internet Of Things.	39
21	Edge Computing	42
22	Faculty	44
23	Faculty Achievement's	46
24	Student Achievement's	48
25	Students shinning in NCC , NSS , Sports	50
26	University topper's	53
27	Student's Achievement's	58
28	Cultural Highlight's	59
29	Departmental Highlight's	60
30	Special Day's	63
31	Our Proudly Placed Students	64

Principal's Message

The world has undergone a transformation due to internet's explosive expansion, which has made life easier and brought us closer than ever. It has become into a vital source of information and education. It has given us new channels through which to communicate and disseminate information. Students who use the internet have access to the full universe of knowledge and communication. From any city in the world, students can use libraries at any hour of the day or night.

It is an established fact that the digital age and easy access to the internet give students unheard-of options for education, communication, and entertainment. However, having unrestricted access to the internet puts their health, safety, and general wellbeing at serious risk. As a result, we must use technology in the proper way and resist the temptation to be drawn in by its glare. We can make sensible decisions by considering the long-term effects thanks to our awareness and education. We can speed up economic progress and advance societal well-being by empowering and connecting students and educators globally. To create such a global learning society, we must work together via a network. As educators and mentors, it is our responsibility to direct our students towards righteousness and at HMV, and we successfully accomplish this goal.

We have moved from the keys of the typewriters to the commands of the binaries. The modes have changed but the utility of expression remains the same. This magazine aims to introduce young minds to the creative world and enhance their capabilities. I commend the team for their tireless work in preparing this magazine and giving students a platform to showcase their writing skills.

Prof. Dr. Mrs. Ajay Sareen

HoD's Message

Dear students

The contemporary world is afflicted with many challenges and problems causing stress and worries. Here what we need along with academic brilliance is emotional intelligence. It is the ability to recognize, use, and control your own emotions in a constructive way in order to reduce stress, communicate effectively, sympathize with others, overcome obstacles, and diffuse conflict. It aids in the development of stronger relationships, professional success and the attainment of career and personal objectives. It can also assist you in connecting with your emotions, putting your intentions into action, and making educated decisions about what is most important to you.

At HMV, we educate our students while guiding them forward with moral values and principles, amidst the expansion of technology. We take delight in assisting them as they mature and transform into compassionate and accountable citizens of the future.

I also offer my deepest gratitude to Prof. Dr. (Mrs.) Ajay Sareen, our revered principal and beacon of light, for her unwavering support and confidence in us. With these words, I present this issue for your readership.

Dr. Mrs. Sangeeta Arora

Editor's Message

It is with immense pleasure I present before you the latest edition of the magazine. It gives me a feeling of satisfaction on the consummation of the task. The magazine is an attempt to preserve the world as the students see, through their writings.

We live in a technological age and are witnesses to the quick advancement of technology in both our personal and professional life. Innovating ahead of others, information technology has changed society, advancing it from the industrial to the networked era. The changing times bring along new challenges and it becomes pertinent that the youth voice their opinion and let out their emotions and feelings. Creative writing aids in our exploration of the human condition, the dissemination of fresh concepts, and our advocacy for a more just society.

I would also like to extend my gracious thanks to the Head of the institution, Principal (Prof.) Dr. (Mrs.) Ajay Sareen for giving us this opportunity to publish this portfolio of young minds. I am thankful to every member who helped in bringing out this issue of the magazine.

Dr. Anil Bhasin

Co-Editor's Message

Dear Students,

First of all, I would like to congratulate every member who has contributed in some way for making the publication of this magazine possible. Every student who has contributed is an Achiever for me. Everyone has been learning throughout till the completion of this edition. The entire magazine has been divided into different sections. In students Article section, we have tried hard to bring before the readers all the latest technologies used in different fields of IT.

Specifically I would like to talk about Chatbots, which are even called as digital assistants, that understand human capabilities. It is basically an AI based computer program that simulates human conversations. Bots interpret and process the user requests and give prompt relevant answers. Chatbots carry out interactions through text or voice and can be deployed across websites, applications and messaging channels such as Facebook, Messenger, Twitter or What Sapp.

Chatbot assistants allow companies to provide a level of customer's service during hours when live agents are not available. They are changing the scenarios of website industry and business world.

Further I would like to thank our leader, our worthy Principal Prof. Dr. Mrs Ajay Sareen, for continuously guiding us in completing this edition successfully.

Lt. Sonia Mahindru

Student Editor's Message

Hello Readers!!!

It was quite a thrill to take our place as the student editors this year!
When we finish college (only 1 semester to go!), we hope we are happy with the all-nighters we've pulled to complete my assignments and catching a nap in between or completing Sem worth syllabus within a week (hey! that's a super power we students own!).
However, despite all my complaining we have already started missing the intellectual environment we've been a part of for 3 whirlwind years!
As they say "there is no turning back once you had jumped down the rabbit hole!" hence, when we first began with this magazine, we students had a world of technology to explore we indulged in "Virtualization" (see page no-7 for our article on Virtualization.) Electronic Information security (view our tips on page-21) or Quantum Computers (catch up on that on page-9) and many more amazing topics! We had fun exploring these concepts on a different angle!
With my college career almost finished, at least for now, it doesn't mean my education is finished. Only once or maybe twice in your life are times that are dramatic, enough to make you aware that the world is teetering between what has been and what's coming I believe this is one of those moments again.

Masarrat Parween

Head Task Force HMV

BCA Sem-5

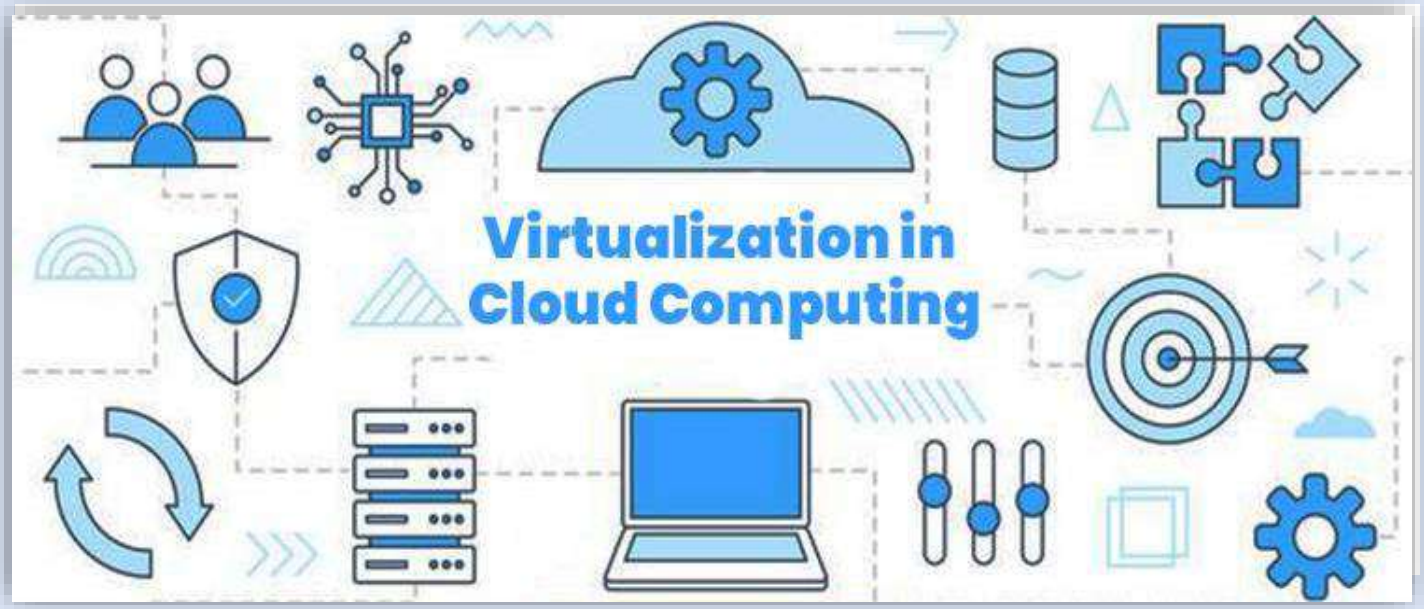
`

VIRTUALIZATION

Deepali
B.Sc. IT (Sem-5) [41004]
ddeepali418@gmail.com

Virtualization is the "creation of a virtual (rather than actual) version of something, such as a server, a desktop, a storage device, an operating system or network resources".In other words, Virtualization is a technique, whichallows sharing a single physical instance of a resource or an application among multiple customers and organizations. It does by assigning a logical name to a physical storage and providing a pointer to that physical resource when demanded.

The terms "**virtualization**" and "**Cloudcomputing**" are often used interchangeably, but they're not the same thing. The software that powers cloud technology is virtualization, while cloud computing is a digital service. Virtualization and cloud computing technologies share a unique relationship and often work together.



Creation of a virtual machine over existing operating system and hardware is known as **Hardware Virtualization**. A Virtual machine provides an environment that is logically separated from the underlying hardware. The machine on which the virtual machine is going to create is known **as Host Machine** and that **Virtual Machine** is referred as a **Guest Machine**

"**Virtualization is a Foundational Element of Cloud Computing"** and helps deliver on the value of cloud computing. Cloud computing is the delivery of shared computing resources, software or data – as a service and on demand through the internet. **Virtualization software** separates computer environments from physical infrastructures so that you can run multiple operating systems and applications simultaneously on the same machine.

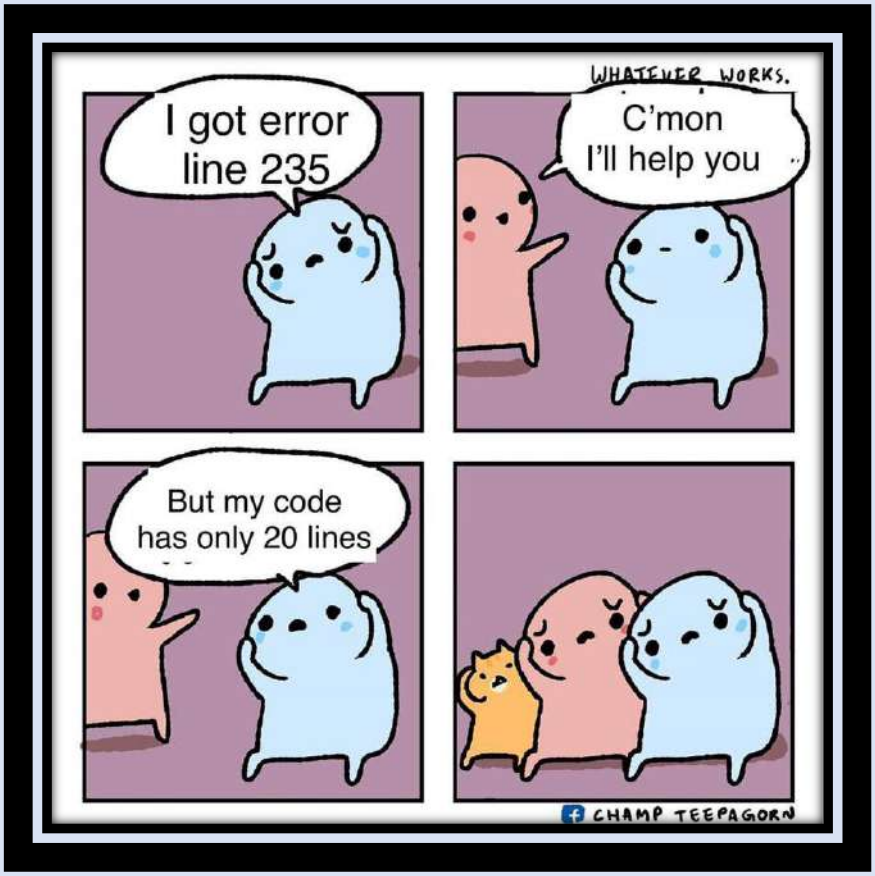
For example, in a workspace virtualization model, if you do most ofyour work on a Mac but use select applications exclusive to PCs, you can run Windows on a virtual machine to access those applications without switching computers.

Advantages of a virtualized environment over the cloud:

- **Maximized resources**: With virtualization, you can maximize your resources by reducing the number of physical systems you need to acquire.

- **Enhanced value**: Virtualization allows you to get the most value from your servers since you can use multiple systems and applications on the same hardware.

- **Integrated costs**: When you use virtualization, you can integrate costs associated with management, administration and all the attendant requirements of managing your own infrastructure into your IT budget.

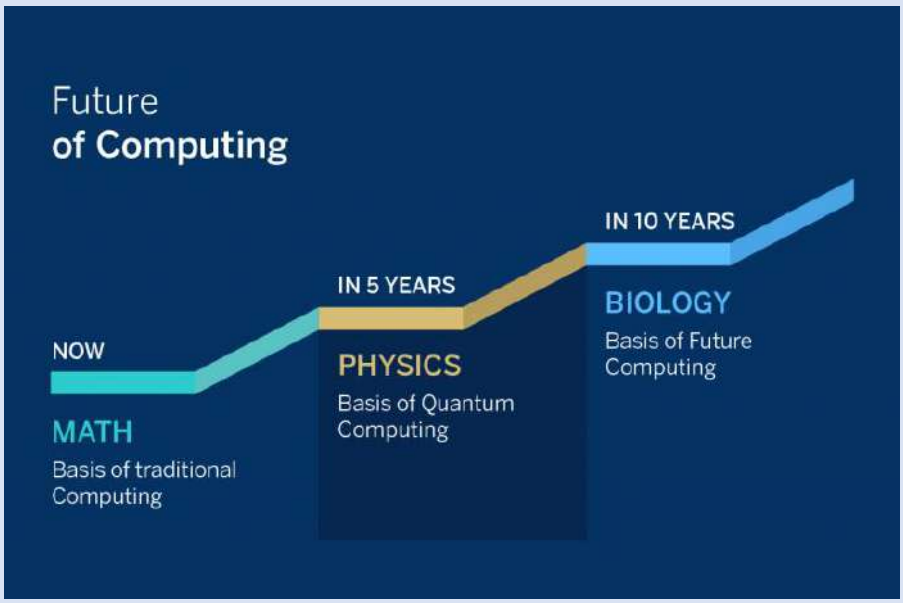


Quantum Computing
The Future of IT

Masarrat Parween.
BCA Sem – 5 [40009]
Masarratparween6@gmail.com

Quantum computing is a

rapidly-emerging technology that harnesses the laws of quantum mechanics to solve problems too complex for classical computers.



WHY DO WE NEED QUANTUM COMPUTERS?

For some problems, supercomputers aren't that super. When scientists and engineers encounter difficult problems, they turn to supercomputers. These are very large classical computers, often with thousands of classical CPU and GPU cores. However, even supercomputers struggle to solve certain kinds of problems.

If a supercomputer gets stumped, that's probably because the big classical machine was asked to solve a problem with a high degree of complexity. When classical computers fail, it's often due to complexity Complex problems are problems with lots of variables interacting in complicated ways. Modelling the behaviour of individual atoms in a molecule is a complex problem, because of all the different electrons interacting with one another. Sorting out the ideal routes for a few hundred tankers in a global shipping network is complex too.

QUANTUM COMPUTERS ARE BUILT FOR COMPLEXITY.

Quantum algorithms take a new approach of complex problems -- creating multidimensional spaces where the patterns linking individual data points emerge. Classical computers cannot create these computational spaces, so they cannot find these patterns. In the case of proteins, there are already early quantum algorithms that can find folding patterns in entirely new, more efficient ways, without the laborious checking procedures of classical computers. As quantum

hardware scales and these algorithms advance, they could tackle protein folding problems too complex for any supercomputer.

QUANTUM COMPUTERS CATEGORIES:
Quantum computers fall into four categories:

Quantum Emulator/Simulator:

These are classical computers that you can buy today that simulate quantum algorithms. They make it easy to test and debug a quantum algorithm that someday may be able to run on a Universal Quantum Computer (UQC). Since they don't use any quantum hardware, they are no faster than standard computers.

Quantum Annealer:
A special purpose quantum computer designed to only run combinatorial optimization problems, not general-purpose computing, or cryptography problems. While they have more physical Qubits than any other current system they are not organized as gate-based logical qubits. Currently this is a commercial technology in search of a future viable market.

Noisy Intermediate-scale quantum computers:

Think of these as *prototypes* of a Universal Quantum Computer – with several orders of magnitude fewer bits. They currently have 50-100 qubits, limited gate depths, and short coherence times. As they are short several orders of magnitude of Qubits, NISQ computers cannot perform any useful computation, however they are a necessary phase in the learning, especially to drive total system and software learning in parallel to the hardware development. Think of them asthe training wheels for future universal quantum computers.

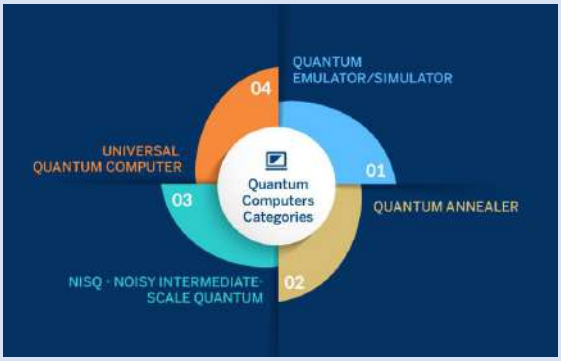
Universal Quantum Computers:

This is the ultimate goal. If you could build a universal quantum computer with fault tolerance (i.e., millions of error- corrected physical qubits resulting in thousands of logical Qubits), you could run quantum algorithms in cryptography, search and optimization, quantum systems simulations, and linear equations solvers.

THE USINESS IMPACTS OF QUANTUM COMPUTING.

Quantum computing has significant potential to speed up problem-solving compared to traditional and supercomputers due to qubits (quantum mechanical bits).

Mainstream business adoption of quantum computing is still a few years away, but some large-scale technology companies are making investments now. It is recommended that organizations prepare for a quantum computing future by watching for the latest developments, learning how to better secure data from potential



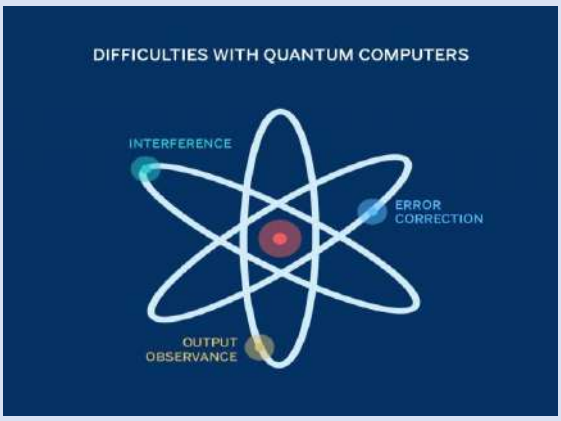
hackers, and shaping their business and industry trajectory that could be disrupted by future technology.

Many industries are going to benefit from quantum computing, learning how to better secure data from potential hackers in sectors such as finance, cybersecurity, and chemical and pharmaceutical companies:

Testing chemical experiments: This is an expensive process, and researchers could quickly test a lot more methods. These simulations can solve chemistry and physics challenges — improving R&D and manufacturing efficiencies leading to better products.

Battery improvements: Algorithms are currently being tested in this area for improving the cost, size, and charging speed of batteries for renewable energy.

Material enhancements: Across industries such as consumer goods and aerospace and transportation, creating and testing material designs can create new possibilities faster and simultaneously reduce costs.

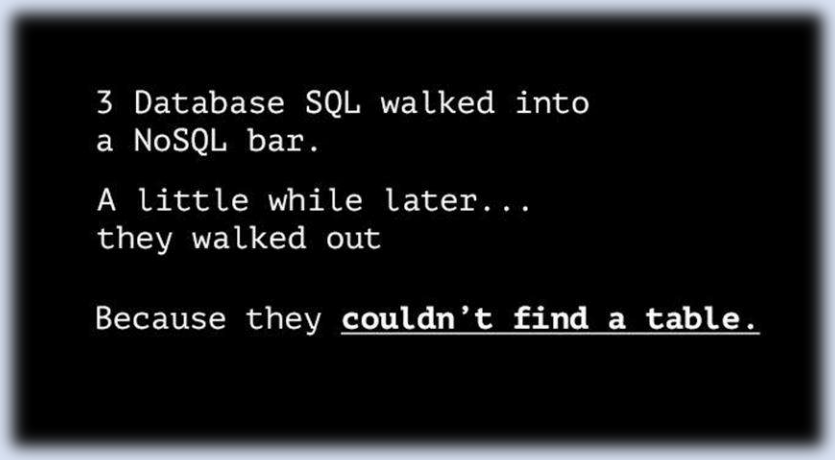


DIFFICULTIES WITH QUANTUM COMPUTERS.

Interference – During the computation phase of a quantum calculation, the slightest disturbance in a quantum system (say a stray photon or wave of EM radiation) causes the quantum computation to collapse, a process known as *de-coherence*. A quantum computer must be totally isolated from all external interference during the computation phase.

Error correction – Given the nature of quantum computing, error correction is ultra-critical – even a single error in a calculation can cause the validity of the entire computation to collapse.

Output observance – Closely related to the above two, retrieving output data after a quantum calculation is complete risks corrupting the data.



NETWORK SECURITY

Nitasha Bhagat
BCA (Sem-5) [40012]
nitashab9@gmail.com

21st century is going on and today's era is the age of technology. There is no area where there is no use of networks and internet protocols. No doubt that the internet has made our lives so advanced.
Even in the pandemic time of CORONA we are completely dependent on the internet. Although it makes us advanced but on other side there is a big great danger looming over it.
YES, it's the danger of security – "*NETWORK SECURITY".*

WHAT IS NETWORK SECURITY? WHY ITS NEEDED?

Network Security involves access control, virus and antivirus software, application security, network analytics, types of network-related security (endpoint, web, wireless), firewalls, VPN encryption and more.

As we see in our surroundings there are so many cases of theft (leakage) of data, cybercrimes, hacking nowadays. It becomes very common all over in the societies.

Attackers have so many types of software, applications that's make it very easy to stole the required information and important data such as usernames, passwords, bank details and other personal information, that they further use for their personal or bad intentions such as blackmailing, frauds, scams for making money.

HOW TO PROTECT?

It is important to make your network secure because it keeps ***sensitive data safe from cyber-attacks*** and ***ensures the network is usable and trustworthy***.

However, if you are working on an online business site, you must have a secure network for the security purpose of your

customer's data, for making your site trustworthy, safe, popular.

- **Develop IT Security Policies & Procedures**

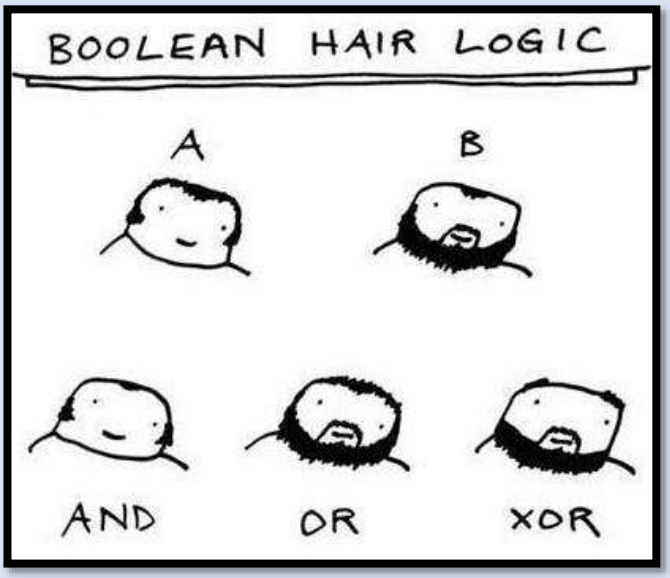
You may have one general Information Security Policy, and other sub or specific policies which support the primary policy. For example, if you are working in an organization then your organization may have a separate policy for Passwords, Mobile Devices, VPN, Social Media, and Internet Usage.

- **Implement security controls**

There are several security control frameworks available that can be used as a reference to establish your security controls.

- **Maintain Security for the future.**

Conclusion- **A Network Security Plan provides the roadmap to operate safely and securely.**



LATEST OPERATING SYSTEM

Harshita Sharma
BSCIT(SEM-5) [41021]
harshitashar23@gmail.com

An operating system (OS) is the program thatafter being initially loaded into the computerby a boot program manages all of the other application programs in a computer. The application program make use of the so by making requests for services through a defined application program interface (API).
Microsoft has released the windows 11 2022 update, the latest version of its operating system for Pc's and laptops.

Different Operating Systems

1. MS-DOS:

MS-DOS which is short for Microsoft Disk Operating System is a non-graphical command line operating system developed for IBM compatible computers with x86 microprocessor.

2. Windows Operating System:

Windows is an operating system designed by Microsoft to be used on a standard x86 Intel and AMD processors.
Solaris or SunOS is the name of the Sun company's Unix variant operating system that was originally developed for its family of Scalable Processor Architecture-based processors.

3.Linux Operating System.

Linux is different from Windows and Apple in that it's not a proprietary software, but rather a family of open source systems. In other words, anyone can modify and distribute it. Linux may be the least known on this list, but it's free and available in many different open source versions. Linux is popular because of its ease of customization and offers a variety of options to those who understand how to use it. If you know how to customize and work with operating systems, Linux is an ideal choice. And if this kind of coding and back-end work is interesting to you, it may be a good idea to purchase a Linux system and get started on manipulating it.

What Is the Purpose of an Operating System?

Operating systems contain and manage all the programs and applications that a computer or mobile device is able to run, which means managing the device's software and hardware functions. The functions of an OS include:

Booting: Booting is the process of turning on the computer and powering up the system.
Memory management: This feature controls and coordinates the computer applications while allocating space for programs.
Loading and execution: Your OS will load, or start up, a program and then execute the program so that it opens and runs.
Data security: A good OS includes features that keep your data safe and computer programs secure. Security features are set up to keep unwanted cyber attackers at bay.
Disk management: This manages all the drives installed in a computer, including hard drives, optical disk drives, and flash drives. Disk management can also be used to divide disks, format drives, and more.
Process management: Your OS is designed to allocate resources to different computer processes, enable the processes to share information, protect them, and synchronize them.
Device controlling: Your OS will allow you to open or block access to devices like removable devices, CD/DVDs, data transfer devices, USBs, and more.
Printing controlling: As an extension of device controlling, your OS takes control of the printers that are connected to the computer, and the materials that need to be printed.
User interface: Also referred to as a UI, this is the part of the OS that allows a user to enter and receive information. This can be done with typed commands, code, and other formats.

THE BEST OS IN 2022 ARE -

1. MS- windows
2. Ubuntu
3. Mac OS
4. Fedora
5. Solaris
6. Free BSD
7. Chrome OS

Windows11 will also support android apps made available through the Amazon app store. Although it lacks the breath of Google play, the store still offers big names including TikTok.

If you really want the latest and greatest version of windows and windows11 is where you want to be.

You might also want to update to windows11 if you want the most secure version of windows. Microsoft has talked a lot about how wundows11 is secure due to TPM 2.0 requirements as well as secure boot.

HEALTH IT

Healthcare information technology (HIT) has been defined as "the application of information processing involving both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision making".

Akshriti
BCA (Sem-5) [40003]
akshdivya9@gmail.com

Health information technology includes various technologies that span from simple charting, to more advanced decision support and integration with medical technology. Health information technology presents numerous opportunities for improving and transforming healthcare which includes; reducing human errors, improving clinical outcomes, facilitating care coordination, improving practice efficiencies, and tracking data over time. Since the original IOM report was published, there has been an accelerated development and adoption of health information technology with varying degrees of evidence about the impact of health information technology on patient safety.

- **Electronic physician's orders and E-prescribing**

At the most basic level, an e-prescribing system serves as an electronic reference handbook. More sophisticated e-prescribing systems act as stand-alone prescription writers. They can create and refill prescriptions for individual patients, manage medications and view patient history, connect to a pharmacy or other drug dispensing site, and integrate with an electronic medical record (EMR) system.

Use of a qualified e-prescribing system is required by the US government's Electronic Prescribing Incentive Program, which gives a medical practice up to a 2% reimbursement of its Medicare Part B charges. A qualified e-prescribing system must be able to transmit prescriptions electronically, warn prescribers about potential allergic reactions and inform physicians about generic alternatives, among other functionality. E-prescribing also reduces the number of prescription errors attributed to bad handwriting or illegible faxes

- **Clinical decision support**

Clinical decision support provides timely information, usually at the point of care, to help inform decisions about a patient's care. Clinical decision support can effectively improve patient outcomes and lead to higher-quality health care. Clinical decision support (CDS) provides timely information, usually at the point of care, to help inform decisions about a patient's care. CDS tools and systems help clinical teams by taking over some routine tasks,

warning of potential problems, or providing suggestions for the clinical team and patient to consider.

- **Bar code medication administration**

Bar code medication administration systems are electronic systems that integrate electronic medication administration records with bar code technology. These systems are intended to prevent medication error by ensuring that the right patient receives the right medication at the right time. Furthermore, there are varying levels of sophistication among existing barcode systems. For example, some software produces alerts when sound-alike or look-alike medications may be confused. Others provide clinical advisories for specific medications when scanned, and others may assist with documentation (namely, recording drug administration in the ear and other relevant clinical details).

- **Patient electronic portals**

Electronic health records (EHRs) were developed to manage clinical information, not to engage patients. However, patient access to their EHR data through online portals or mobile applications represents a potential tool for improving patient engagement. As the landscape expands with the growth of application programming interfaces to increase bidirectional data flow with patients and greater patient access to medical data, such as clinical notes, the potential impact of patient engagement with these platforms will grow in parallel.

- **Telemedicine**

Telemedicine is defined as the use of telecommunication technologies to facilitate patient to provider or provider to provider communication. Communication maybe synchronous with real-time 2-way video communication or asynchronous transmission of patient clinical information.

- **Overall impact of EMR on patient safety**

Numerous studies have considered the outcomes of implementing an electronic medical record on healthcare quality and patient safety, with a majority of studies showing favourable results.

FIREWALL

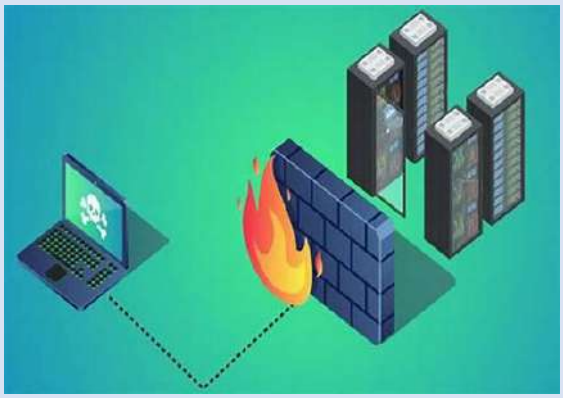
The primary purpose of security is to provide Confidentiality, Integrity, and Availability of data. Confidentiality ensures that authorized parties only access information. Integrity ensures that information cannot be modified as it moves from one point to another. Availability ensures that information is always available when requested. A hardware or software firewall is a device that is used to achieve the security of data.

Palak Rana
B.Sc. IT (Sem-5) [41005]
ranapalak019@gmail.com

A **Firewall** is a security component used in computer devices to monitor incoming and outgoing (inbound and outbound) traffic and protect unauthorized access to the network.

Techniques

There are several security techniques a firewall provides.
The most common ones are packet filters; it checks the data packets by inspecting the source and destination IP address and port number—the application gateway- in which telnet and FTP servers are provided with safety measures. Proxy server acts as an intermediary between clients and servers and is used to hide original network addresses by preventing direct contact of the device with other systems, deep packet inspection- an advanced packet filtering technique used to block viruses, spam, and intrusion to a network.



Confidentiality

One of the purposes of firewalls is to provide confidentiality of data. Firewall blocks unauthorized networks, hence, protects the confidential information of users in the system against malicious users.

Authentication

Firewall provides a database with usernames and passwords for authenticating a list of authorized users to let them access the network. The filtering process of firewalls faces a problem with public key encryption as public-key encryption encrypts the message, and the secret key is required to decrypt it, due to which firewalls could not filter the message. Even if a firewall decrypts the message using the receiver's secret key, then the user's confidentiality would be disrupted.

However, the firewall can encrypt network-level encryption itself on the TCP, UDP, and ICMP packets to prevent snooper or attacker from seeing which ports are being used. Firewalls equipped with a VPN can also be used to encrypt data, which provides additional security to users.

ELECTRONIC INFORMATION SECURITY

Palak Kumar
M.Sc. IT (Sem-3) [45153]
palakkumar328@gmail.com

It can be rightfully said that today's generation lives on the Internet and we, general users are almost ignorant that how the data we are sharing online reaches a computer securely. It's not magic. It is a technology that makes sure that your data reach you unzipped.

We are living in the digital era, whether it is booking a hotel room, ordering some dinner, or even booking a cab. We are constantly using the internet and generating lots of data that is generally stored on a cloud which is a huge data server or data centre that you can access online. Also, we use many different kinds of devices to access data.

Now for a hacker, it's a golden age with so many opens devices and public information that we share online. The black had hackers are having a hell of a time exploiting personal data. Hackers are becoming smarter and more creative with their malware and how they bypass all the security techniques like antivirus software, firewall and many more still baffle many people.

What are the various types of cyber-attacks?

- **Malware:** Malware is an all-encompassing term for a variety of cyber threats including viruses. It is something with malicious intent that steals data or destroys something on your computer.
- **Password Attack:** - A password attack is exactly what it sounds like, a third party trying to gain access to your system by cracking a user password.
- **Man in the Middle:** - Man in the middle steals your personal information from the endpoint by impersonating the wrong identity. E.g., If we use online banking, the man-in-middle communicates with you by impersonating the bank and with the bank impersonating you. Thus, he will receive all the information like your bank account and other banking passwords.
- **Driven By Download:** - Through the malware, on an unauthorized website, a program is downloaded to a user's computer system just by opening the site. It doesn't require any user action to download it.

These attacks not only apply to us as individuals but also to larger organizations. Even big companies like eBay, AQL, Ever note, Adobe have gone through major cyber breaches although they have lots of security techniques to protect the data.

After reading all this, we must be thinking that there must be a mechanism and protocol to protect our data. Indeed, there are ways and this is called Cyber Security. We must know what we can do to secure our data from hackers.

- **Choose A Secure Password:** The key to our digital kingdom is password and it should be closely protected. To create a secure password, use a combination of upper case and lower-case letters, symbols, and numbers. Don't use a very common password that is easy to guess and do make sure that your password is at least 8 characters long. A password like %Iw2g2e! @ Will be very tough to crack.
- **How to Avoid Identity Threats Online:** Identity Threat is the leading cause of consumer complaints to FTC (Federal Trade Commission). The FTC reports that 9 million identities are stolen every year in the US.

Protect Your Personal Information

- Transact Financial business online only with secure websites i.e., whose URL begins with "https".
- Install personal Firewall, Antivirus, Antispyware, and Ant spam protection, if available. We can get them by paying some amount and protecting your computer or personal data by installing them.

Protection from Phishing Scam

- Whenever you get an email pretending to be a legitimate company, always check whether it has a secure or legal email address or if they had provided their original information.
- Never click on any link provided by them as it can cause harm to your computer.
- Install Antispyware on your system. It will protect your data from Spywares.

Although hackers and spams are everywhere on the Internet, we cannot surely protect our data 100%. But by applying the above methods we can at least secure our data from our side.

INTELLIGENT VIDEO ANALYTICS

Isha Arora
BCA(Sem-3) [40151]
arora.isha158@gmail.com

What is intelligent video analytics?

The main goal of video analytics is to automatically recognize temporal and spatial events in videos. A person who moves suspiciously, traffic signs that are not obeyed, the sudden appearance of flames and smoke; these are just a few examples of what a video analytics solution can detect.

Video Analytics: -

Video content analysis or video content analytics (VCA), also known as video analysis or video analytics (VA), is the capability of automatically analysing video to detect and determine temporal and spatial events.

This technical capability is used in a wide range of domains including entertainment, video retrieval and video browsing, health-care, retail, automotive, transport, home automation, flame and smoke detection, safety, and security. The algorithms can be implemented as software on general-purpose machines, or as hardware in specialized video processing units.

Many different functionalities can be implemented in VCA. Video Motion Detection is one of the simpler forms where motion is detected with regard to a fixed background scene. More advanced functionalities include video tracking and emotion estimation.

Real-time video analytics and video mining: -

Usually, these systems perform real-time monitoring in which objects, object attributes, movement patterns, or behaviour related to the monitored environment are detected. However, video analytics can also be used to analyse historical data to mine insights. This forensic analysis task can detect trends and patterns that answer business questions such as:

- When customer presence at its peak in my store and what is their age distribution?
- How many times is a red light run, and what are the specific license plates of the vehicles doing it?

Video analytics with deep learning: -

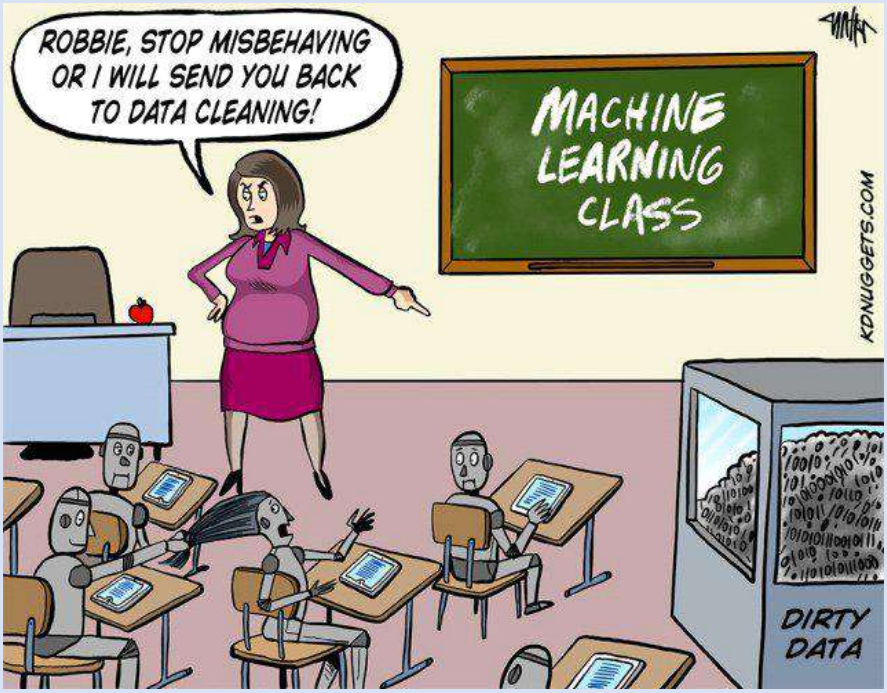
Machine learning and, in particular, the spectacular development of deep learning approaches, has revolutionized video analytics.

The use of Deep Neural Networks (DNNs) has made it possible to train video analysis systems that mimic human behaviour, resulting in a paradigm shift. It started with systems based on

classic computer vision techniques (e.g. triggering an alert if the camera image gets too dark or changes drastically) and moved to systems capable of identifying specific objects in an image and tracking their path.

Real-world example: -

A great example of video analytics used to solve real-world problems is the one of the city of New York. In order to better understand major traffic events, the New York City Department of Transportation used video analytics and machine learning to detect traffic jams, weather patterns, parking violations and more. The cameras capture the activities, process them and send real-time alerts to city officials.



MACHINE LEARNING

Machine learning is a sub field of artificial intelligence, which is broadly defined as the capability of a machine to imitate intelligent human behaviour. Although machine learning is continuously evolving with so many technologies, it is still used in various industries. Machine learning algorithms are melded on a training dataset to create a model as new input data is introduced to the trained ML algorithm; it uses the developed model to make a prediction.

Gurpreet Kaur
BSC (IT) (Sem-1) [41215]
Gurpreetkaur8100@gmail.com

IMPORTANCE OF MACHINE LEARNING

Machine learning is growing in importance due to increasing enormous volume and variety of data, the access and affordability of computational power, and the availability of high speed internet. Also, it gives enterprises a view of trends in customer behaviour and operational business patterns, as well as supports the development of new products. Many of today's leading companies, such as Netflix, Facebook and Google etc. They make machine learning a central part of their operations.

HOW IS MACHINE LEARNING USED IN MARKETING?

- Machine learning will offer ley insights into optimization, helping brands understand what people want to read
- Humans will be in charge of creating high quality content that speaks to the needs of the customers, as detailed by the machine learning or artificial learning perform
- Machine learning will analyse customer behaviour on websites to better understand how people progress through the buyer's journey
- Machine learning will take the content created by people and develop and more personalized experience.

TYPES OF MACHINE LEARNING

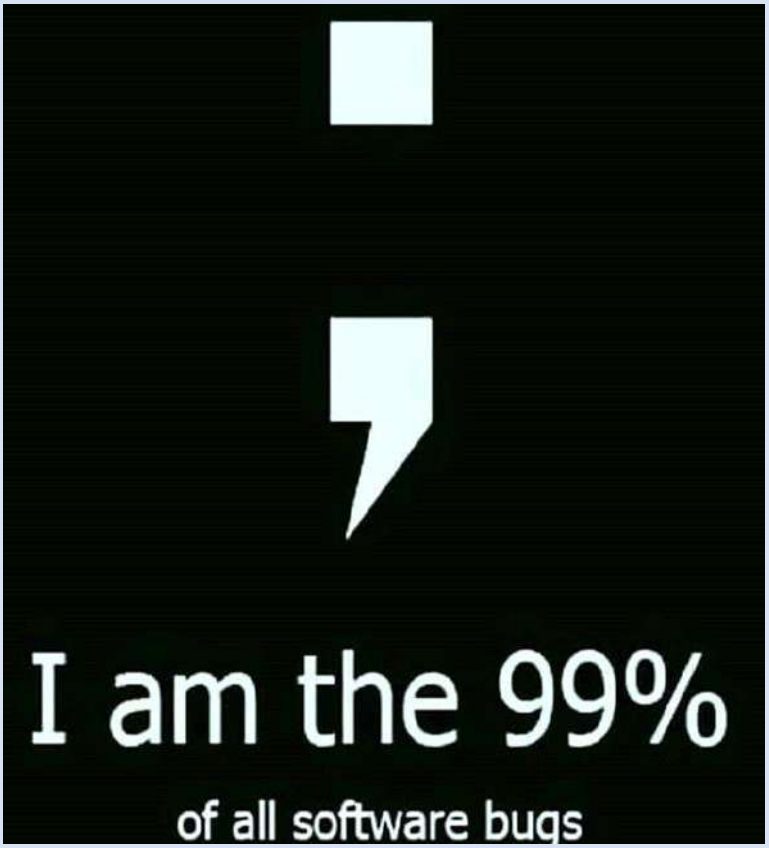
These machine learning algorithms help to solve different business problems like regression, classification, forecasting etc.

Based on the methods and way of learning machine learning is divided into four types which are: -

1. Supervised machine learning
2. Unsupervised machine learning
3. Semi-Supervised machine learning
4. Reinforcement learning

FUTURE OF MACHINE LEARNING

In a survey conducted by PWC in 2021, 86% of individuals said that Machine Learning and Artificial Intelligence are now a mainstream part of their company. Machine learning has been applied to many industries, including healthcare, finance, banking, retail, manufacturing, and transportation, just to name a few. The potential for machine learning in these industries ranges from cutting-edge innovations to more mundane tasks like customer service or fraud detection.



INTERNET PRIVACY

Internet Privacy: - - Internet privacy involves the right or mandate of personal privacy concerning the storing, repurposing, provision to third parties, and displaying of information pertaining to oneself via Internet. Internet privacy is a subset of data privacy. Privacy concerns have been articulated from the beginnings of large-scale computer sharing.

Kriti
BSc(IT) Sem-3 [41105]
kritimiddha786@gmail.com

Privacy can entail either personally identifiable information (PII) or non-PII information such as a site visitor's behaviour on a website. PII refers to any information that can be used to identify an individual. For example, age and physical address alone could identify who an individual is without explicitly disclosing their name, as these two factors are unique enough to identify a specific person typically. Other forms of PII may soon include GPS tracking data used by apps, as the daily commute and routine information can be enough to identify an individual.

It has been suggested that the "appeal of online services is to broadcast personal information on purpose. “On the other hand, in his essay "The Value of Privacy", security expert Bruce Schneider says, "Privacy protects us from abuses by those in power, even if we're doing nothing wrong at the time of surveillance."

Internet Privacy Issues:

1. **Tracking**-)

If you perform any online activities you’re going to leave a trail of “cookies” that show where you’ve been, what sites you spent time doing on a website, what you may have ordered from various online sites and other private details. In case you’re not familiar with the term “cookies,” they are created whenever you visit a website. They are sent to your computer by the website and contain data about your visits, and can be used later by the web server when processing your online session.

2. **Hacking**-)

Hacking, a term that most everyone is familiar with is when some cyber thief breaks into your computer or some third-party computer that stores all of your personal or financial information. Once that information is stolen, you’ll be subject to phone calls and emails that

are nothing more than "phishing" scams that attempt to steal more data or get you to visit websites using phony links that look real.

3. **Trading**-)

Trading, the third of the "top 3" privacy issues, is when hackers trade your personal information and financial data that they stole from your computer or a third-party computer that stored your data. Sadly, you can view how prevalent trading is by visiting chat rooms where stolen identity data is sold to the highest bidder – about $1 to $3 per name. Once that information is sold, it can damage a person's life or financial reputation in ways you can't even begin to imagine.

Staying Safe

With all of the cybercrime and nefarious activity happening on the web, how can one stay safe from tracking, hacking and trading? There are several tactics to use, and if implemented on a continuous basis you'll have a good chance of staying safe. Consistency is the key.

Tracking:

When it comes to tracking, the best way to prevent being tracked is to constantly clear your browser history. Most everyone uses Google as their "go-to" search engine, but Google tracks and collects information on all of your online activity. The work-around is to start using search engines that don't track your activities, like DuckDuckGo, Search Encrypt, Start Page and others.

Some browsers like Chrome have an "incognito mode." It helps you avoid being tracked but unfortunately, it's not 100% reliable. Social media is another area where your activities are being tracked, but sites like Facebook and others have privacy settings that can help prevent tracking. Be sure to check each social media site you use so privacy settings are engaged.

Hacking:

Privacy is key to a safe online experience, and when cybercriminals hack your information it can cause innumerable problems. The best way to prevent hacking is to always update your computer's operating system software whenever a new release is available. They are generally used to install new security features, and having the latest ones will help protect your data.

Another way to ensure your privacy is to monitor your Wi-Fi usage. Make sure you have the latest security updates on your Wi-Fi network, and always try to visit secure websites that begin with "HTTPS." Finally, always use a strong password (10 characters or longer), and use separate passwords for each account you visit.

Trading:

There are no sure-fire ways to safeguard your data from being traded, but you can take some steps to protect your data and identity. The best strategy is to use a VPN (a "virtual private network") when you are on the Internet. It gives you a secure connection between your computer and any site you visit. It will also hide your IP address, making it harder for cybercriminals to steal your information. The top ones are ExpressVPN, Cyber Ghost and IPVanish, but there are many others to choose from.

Conclusion:

Clearly, privacy is an emerging and increasingly important field in India's internet society. As companies collect greater amounts of information from and about online users, and as the government continues to seek greater access and surveillance capabilities, it is critical that India prioritizes privacy and puts in place strong safeguards to protect the privacy of both Indians and foreigners whose data resides temporarily or permanently in India. The first step towards this is the enactment of a comprehensive privacy legislation recognizing privacy as a fundamental right. The Report of the Group of Experts on Privacy and the government considering a draft privacy bill are all steps in the right direction.

ARTIFICIAL INTELLIGENCE

Artificial intelligent is the ability of a computer program to learn and think. It is also a field of study which tries to make computers "smart". Artificial Intelligence is a combination of two different words: Artificial+Intelligence

- Artificial is said to be manmade.
- Intelligence is the capacity of mind to understand principals, truth, facts or meanings so as to acquire knowledge and apply it to practice.

Yogita
BCA (Sem-1) [40228]
yogitaheer8@gmail.com

The term AI was first coined by an American Computer Scientist named John McCarthy in 1956 at the Denmark Conference. He is also known as the father of A.I.

Particular applications of AI include expert systems, speech recognition and machine vision.AI can be considered as either weak or strong. Weak AI system is designed and trained for a particular task. Strong AI system are the systems with generalized human cognitive abilities.

While AI tools present a new functionality for businesses, it also raises ethical questions for deep learning algorithms. Its smartness depends on the data given in training.

It might be easier to state that artificial intelligence (AI) hasn't touched a significant part of our modern society. But there is no doubt in it that it is very important in our daily lives, business operations and society. Artificial Intelligence or AI is nothing, but the science of computers and machines developing intelligence like humans.

Classifications of AI

Based on Capability

Based on fuctionality

Advantages of Artificial Intelligence:

- AI Drives down the time taken to perform a task.it enables multi-tasking and eases the workload for existing resources.
- AI enables the execution of hitherto complex tasks without significant cost outlays.
- AI has mass market potential it can be deployed across industries.

MOBILE

In today's era, there are very few persons that do not have a mobile or not using mobile phones. Nowadays, mobile become a priority in everyone's life, so that every person uses it in their daily life for communication, business purposes, and for other activities. In today's world, the mobile phone has completely changed the life of an individual.

Ridhima
BCA (Sem-1) [40254]
ridhubhandari2004@icloud.com

We know that everything has its own impacts, good or bad.

Same for the mobile phones, somehow it is a wonderful invention, and on the other hand, it includes the worst things with it. As a right perspective, the mobile phone is an extraordinary invention for humans, but using it for many hours constantly will create several problems.

- **Advantages of mobile phones**

Mobile phones have changed the way of communication. Before mobiles, there was a use of landline phones or letters for communicating with a person who lives far from you

- **Easy Communication**

The main benefit of using the mobile phone is that they make the mode of communication easier and cheap. Because of the lower price, mobile is affordable and has been a revolution in the telecom industry where approximately 95% of people use mobile phones for communication.

Mobile made communication easier, as just by pressing some keys on mobile, we can contact our friends, family members or colleagues, and others at any time. Mobile also gives us a facility to contact our fellow person with voice calls, video calls, text messages, recorded calls, and many more.

- **Education**

It is another major advantage of mobile phones. Mobile phones can be used to acquire knowledge or information on various topics. For convenience, nowadays, most colleges, institutions, and schools are offering online education with the proper study material that can be in the form of images, photos, text, pdf, etc. In the corona pandemic, we have seen that the students have taken online classes provided by their respective institutions to ensure the safety and health of students.

- **Promoting business**

Mobile phones can be used for promoting a business. Mobile phones are best for entrepreneurs or businessmen to promote their business via online or offline sources. In online sources, one can use social media websites and messaging applications such as telegram, Instagram, WhatsApp, Pinterest, and others. Most of the leading companies arrange their meetings on video messaging applications like skype.

- **Disadvantages of mobile phones**

Along with the numerous benefits, mobile phones also have various limitations. Let's discuss the limitations of using mobile phones in detail.

- **Distraction**

Sometimes mobile is a disturbing device that creates a distraction between your works. It is seen in students that are easily distracted from their studies because of mobiles, as the device contains applications that attract users to enjoy their software. One such application is the various mobile games that are being played a couple of days make the people addicted and distracted from their goals.

- **Ear problems**

While listening to songs, watching movies, or calling for a long time with headphones or headset can damage the listening potential of an individual. It has been seen in researches that using headphones with the louder hearing sound seriously disturbs the capability of ears to hear voice properly.

- **Wastage of time**

Although mobiles are helpful in various aspects, it is one of the biggest thing responsible for the wastage of time. Most students and teenagers are affected by it. Students want to play games, watching movies, listening songs, and other kinds of entertainment that waste their precious time.

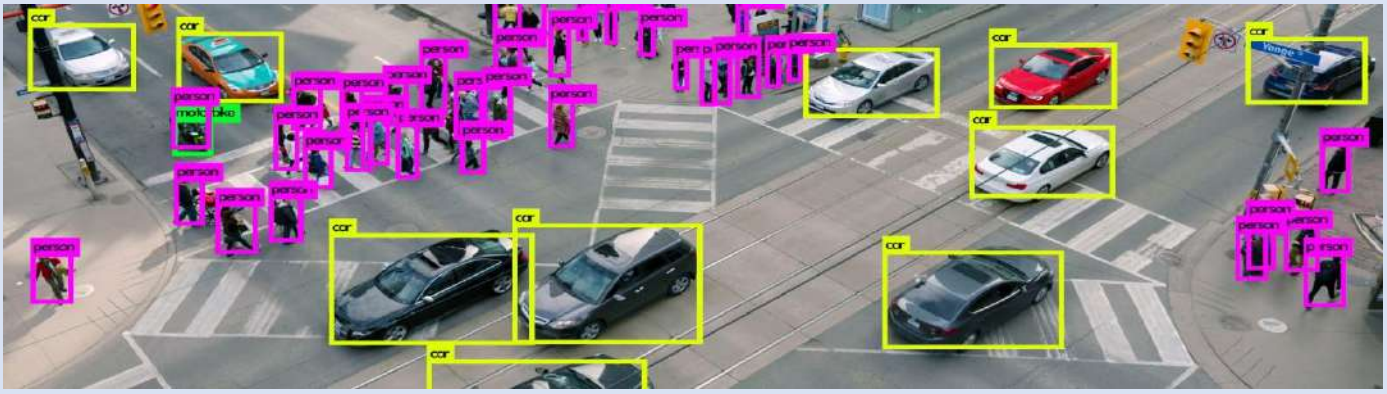
VIDEO SURVEILLANCE

Video surveillance systems have become more commonplace to improve security and safety processes thanks to the development of artificial intelligence (AI) algorithms, even providing actionable business intelligence for organizations. Read our useful guide to video analytics, covering what we mean by the term, how they're delivered, a short history and the benefits they provide for end-users.

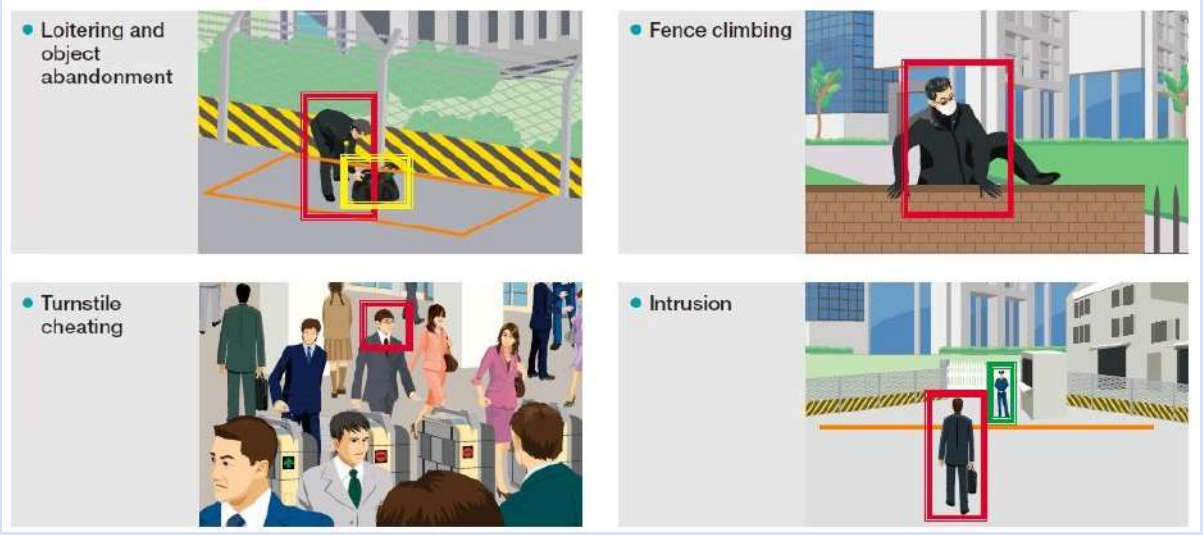
Kumakshi
M.Sc. IT (Sem-3) [45152]
kaileykumakshi@gmail.co

Machine learning and, in particular, the spectacular development of deep learning approaches, have revolutionized video **analytics**.

The use of Deep Neural Networks (DNNs) has made it possible to train video analysis systems that mimic human behaviour, resulting in a paradigm shift. It started with systems based on classic computer vision techniques (e.g. triggering an alert if the camera image gets too dark or changes drastically) and moved to systems capable of identifying specific **objects** in an image and tracking their path.



Video analytics with deep learning



Applications

*1.**Healthcare***

Historically, healthcare institutions have invested large amounts of money in video surveillance solutions to **ensure the safety** of their patients, staff, and visitors, at levels that are often regulated by strict legislation. Theft, infant abduction, and drug diversion are some of the most common problems addressed by surveillance systems.

*2.**Transportation***

Video analytics has proven to be a tremendous help in the area of transport, aiding in the development of smart cities. An increase in traffic, especially in urban areas, can increase accidents and traffic jams if adequate traffic management measures are not taken. Intelligent video analysis solutions can play a key role in this scenario.

*3.**Retail***

Amazon Go is how Amazon entered the grocery industry. It attempts to simplify the customers' shopping experience by avoiding checkouts and letting the customers just walk out of the grocery store, automatically charging them according to what they grabbed.

*4.**Security***

Facial and **license plate recognition** (LPR) techniques can be used to identify people and vehicles in real-time and make appropriate decisions. For instance, it's possible to **search for a suspect** both in real-time and in stored video footage, or to recognize authorized personnel and **grant access** to a secured facility.

What are the benefits of video analytics to security end-users?

Video analytics not only serves pure security concerns, but also traffic and crowd control management, footfall analysis and social distancing or face mask detection.

Increasingly, video surveillance devices are being integrated into other physical security and building management platforms to provide more intelligent data for security and facilities managers.

There is no doubt that video analytics are an attractive option for many sites. By potentially preventing incidents they save on costs related to damage to property and assets, theft and disruption to general business continuity.

Meanwhile, for better or for worse, automated systems mean staffing levels can be managed. Fewer staff is needed if breaches to perimeter fences etc. are detected automatically. By the same token, video analytics will decrease the likelihood of risk to staff and customers.

CAREERS IN INFORMATION TECHNOLOGY

Shubham
B.Sc. IT (Sem-5) [41002]
Shubhmaini786@gmail.com

Today there is a substantial advancement in Information Technology. It's a massive platform to pursue a career in various industries in copious sector. There are endless job options with suitable pays. Stepping in Information Technology you need not to worry about your career, it has many sectors which employ so choosing Information Technology would build your career with its immense knowledge and skills. Information Technology has money-making avenues in which you can set your careers:

Government sector: - In the government sector, there are various IT departments that require its killed professionals to maintain and manage highly confidential data and protect it from unauthorized users or threats. By joining government sectors, it itself leads consistent salary increment and job security.

Systems Analysis: Those who choose this niche become expert in administering and managing servers at workplaces.

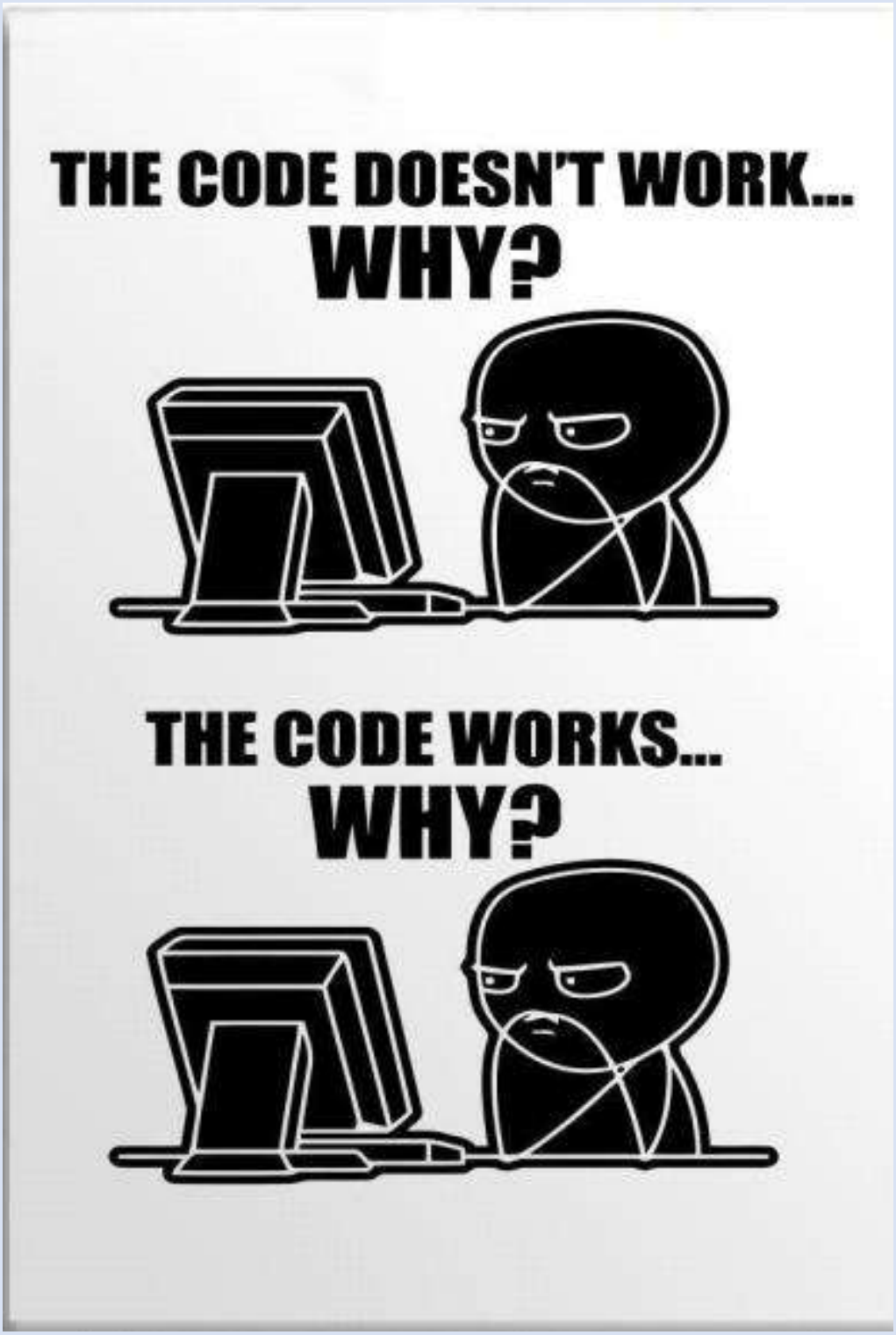
Cyber, System and Network Security: Professionals in this domain are high in demand due to globalisations and threat of unknown viruses that damage high-value data of organisations. These experts specialise in network security and management of information technology.

Computer Support Specialist: Computer Support Specialist provides solution and troubleshoots the issues of individuals and business that have queries or questioned about their software.

Database Administrator: Database Administrator uses software and programs to maintain and manage the data and the information for the business. Data managing and organizing seems to be a straightforward job, but it is not as easy as it seems to be as you need to quite very skillful to get this position.

System Administrator: System Administrator is a known skillful person. System Administrator has maintenance operations of a business, networks, including LAN's and WAN's and other communication system. It is a job of skills and responsibility.

Department of Information Technology in various Sectors offers a high package to their employees in mentioned jobs where you can build your career and you would able to develop more knowledge and skills to become a professional is this field.



INTERNET OF THINGS

The internet of things, or IoT, is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. thing in the internet of things can be a person with a heart monitor implant, a farm animal with a biochip transponder, an automobile that has built-in sensors to alert the driver when tire pressure is low or any other natural or man-made object that can be assigned an Internet Protocol (IP) address and is able to transfer data over a network.

Komal
BSc-It sem-3 [41118]
kumarikomal5181@gmail.com

A Increasingly, organizations in a variety of industries are using IoT to operate more efficiently, better understand customers to deliver enhanced customer service, improve decision-making and increase the value of the business.

How does IoT work?

An IoT ecosystem consists of web-enabled smart devices that use embedded systems, such as processors, sensors and communication hardware, to collect, send and act on data they acquire from their environments. IoT devices share the sensor data they collect by connecting to an IoT gateway or other edge device where data is either sent to the cloud to be analysed or analysed locally. Sometimes, these devices communicate with other related devices and act on the information they get from one another. The devices do most of the work without human intervention, although people can interact with the devices -- for instance, to set them up, give them instructions or access the data.

The connectivity, networking and communication protocols used with these web-enabled devices largely depend on the specific IoT applications deployed.

IoT can also make use of artificial intelligence (AI) and machine learning to aid in making data collecting processes easier and more dynamic.

Why is IoT important?

The internet of things helps people lives and work smarter, as well as gain complete control over their lives. In addition to offering smart devices to automate homes, IoT is essential to business.

IoT enables companies to automate processes and reduce labor costs. It also cuts down on waste and improves service delivery, making it less expensive to manufacture and deliver goods, as well as offering transparency into customer transactions.

As such, IoT is one of the most important technologies of everyday life, and it will continue to pick up steam as more businesses realize the potential of connected devices to keep them competitive. Long Range Wide Area Network (Lora WAN) is a protocol for WANs designed to support huge networks, such as smart cities, with millions of low-power devices.

Google's Brillo/Weave is a platform for the rapid implementation of IoT applications. The platform consists of two main backbones: Brillo, an Android-based OS for the development of embedded low-power devices, and Weave, an IoT-oriented communication protocol that serves as the communication language between the device and the cloud. Calvin is an open source IoT platform released by Ericsson designed for building and managing distributed applications that enable devices to talk to each other. Calvin includes a development framework for application developers, as well as a runtime environment for handling the running application. Consumer and enterprise IoT applications.

There are numerous real-world applications of the internet of things, ranging from consumer network by exploiting poorly secured IoT devices because IoT devices are closely connected, all a hacker has to do is exploit one vulnerability to manipulate all the data, rendering it unusable. Manufacturers that don't update their devices regularly -- or at all -- leave them vulnerable to cybercriminals.

Additionally, connected devices often ask users to input their personal information, including names, ages, addresses, phone numbers and even social media accounts -- information that's invaluable to hackers. Hackers aren't the only threat to the internet of things; privacy is another major concern for IoT users. For instance, companies that make and distribute consumer IoT devices could use those devices to obtain and sell users' personal data.

Beyond leaking personal data, IoT poses a risk to critical infrastructure, including electricity, transportation and in uncial services.

What is the history of IoT?

Kevin Ashton, co-founder of the Auto-ID Center at the Massachusetts Institute of Technology (MIT), first mentioned the internet of things in a presentation he made to Procter &Gamble (P&G) in 1999. Wanting to bring radio frequency ID (RFID) to the attention of P&G's senior management, Ashton called his presentation "Internet of Things" to incorporate the cool new trend of 1999: the internet. MIT professor Neil Gershenfeld's book, When Things Start to Think, also appeared in 1999. It didn't use the exact term but provided a clear vision of where IoT was headed.

IoT has evolved from the convergence of wireless technologies, micro electro mechanical systems (MEMSes), micro services and the internet. The convergence has helped tear down the silos between operational technology (OT) and information technology (IT), enabling unstructured machine-generated data to be analyzed for insights to drive improvements. Although Ashton's was the first mention of the internet of things, the idea of connected devices has been around since the 1970s, under the monikers embedded internet and pervasive computing.

The first internet appliance, for example, was a Coke machine at Carnegie Mellon University in the early 1980s. Using the web, programmers could check the status of the machine and determine whether there would be a cold drink awaiting them, should they decide to make the trip to the machine.IoT evolved from M2M communication, i.e., machines connecting to each other via a network without human interaction. M2M refers to connecting a device to the cloud, managing it and collecting data.

Taking M2M to the next level, IoT is a sensor network of billions of smart devices that connect people, systems and other applications to collect and share data. As its foundation, M2M offers the connectivity that enables IoT. 4The internet of things is also a natural extension of supervisory control and data acquisition (SCADA), a category of software application programs for process control, the gathering of data in real time from remote locations to control equipment and conditions. SCADA systems include hardware and software components.

EDGE COMPUTING

Introduction

Muskan Kapoor
BCA sem-5 [40014]
Kapoormuskan548@gmail.com

During the last few years, we have witnessed a massive increase in the number of devices connected to the Internet. In particular, it is expected that the number of connected devices will be more than three times the global population by 2023. Indeed, Machine-To-Machine (M2M) connections will correspond to half of such connected devices (up to 14.7 billion M2M connections) in that year. This deployment has fostered the deployment of the Internet of Things (IOT) paradigm, a comprehensive network of intelligent objects that have the capacity to automatically organize, share information, data, and resources, react and act in the face of situations and changes in the environment. This has led to an exponential growth in the amount of data traffic flowing through the network.

The computation of shared data can be intensive and can usually not be completed by the IOT devices themselves, due to limited resources (memory, battery, etc.) The deployment and exploitation of the cloud paradigm has helped companies address this capacity limitation by offloading intensive computing tasks to the cloud. However, this offloading has a penalty on the quality of service (QOS) offered, such as the increase in latency imposed by the distance between the cloud and the end devices, the network overhead, and the increase in the security and privacy risk that this offloading entails.

To reduce this penalty, over the last few years, the edge computing paradigm has been proposed. Edge computing allows the offloading of the computing task to nodes closer to the end devices (at one hop from them). Therefore, these tasks are closer to the source of data and the consumer of data, increasing the quality of service offered.

However, the exact definition and coverage of edge computing are unclear. Some researchers indicate that edge computing addresses the offloading of computing tasks from the cloud to the last hop before smart devices, others indicate that it only covers the set of devices at one hop from end devices, some also include IOT devices, etc. In addition, different researches recommend the application of edge computing for different domains, applications with a strict response time, for those who want to reduce the infrastructure cost or to improve the privacy management. Therefore, there is currently a lack of consensus on the specific coverage, targeted domains, and benefits of edge computing.

For this paradigm, to have an adoption by the industry similar to that of other proposals, such as cloud computing, all stakeholders should share a common vision, clearly knowing the different elements and concepts involved in it, what are the main problems that allow them to address, what are the main benefits provided, and for which domains.

This paper presents an analysis of the vision of edge computing in the industry. To this end,

29 international companies have been surveyed to identify what they understand by edge computing, what problems it addresses, and what benefits it provides. This analysis allows us to bring the vision of the business world closer to the academy, allowing both of them to better focus

Cloud computing is architecture based on accessing centralized computing resources ubiquitously and on demand by making use of the network. This paradigm was standardized by the National Institute of Standards and Technology (NIST). The concept of cloud computing is to have hugely powerful servers in data centers connected to the network. The resources of cloud servers are then virtualized and offered to clients. Cloud computing has been the de facto solution over the past decade. One of the main reasons for its rise and wide adoption is the clarity and common vision that the entire industry has about the advantages and disadvantages that it provides. For Edge Computing (EC), and other similar paradigms, to be successfully incorporated by the industry, it is necessary for them to clearly share its vision and the benefits it brings.

Faculty

Dr. Sangeeta Arora,
HOD, **Dean Curriculum Coordination**

Dr. Anil Bhasin
Associate Professor,
Dy -Controller Examination, Incharge Computer Club, Incharge Time table. Incharge Departmental Library

Mr. Gullagong
Associate Professor,
Admission Committee, Sec Staff Welfare society,

Mr. Gurmeet
Associate Professor,
Dean Campus Maintenance, Change of faculty and

Mrs. Sangeeta Bhandari
Associate Professor,
Block Incharge Discipline, Member Placement Cell, Member Time Table

Dr. R. Jindal

Associate Professor,

Co-Dean Student welfare.

Mr. Jagjit Bhatia
Associate Professor,
Placement Officer

Mrs. Urvashi
Assistant professor,
Dean, Student Council.

Lt. Sonia Mahindru
Associate NCC Officer,
Army Wing

Mr. Pardeep Mehta
Assistant Professor
Member Discipline committee, Career Counseling Cell, Time Table.

Faculty Achievements

Dr. Anil Bhasin Associate Professor in Computer science completed his **doctorate in Computer Science from Punjabi university** Patiala in May 2022 and awarded with PHD degree.

Dr. Ravinder Mohan Jindal Associate Professor in Computer science completed his **doctorate in Computer Application from Sant. Baba Bhag Singh University,** Jalandhar in Jan 2023 and awarded with PHD degree .

Faculty Achievements

ANO Lt. Sonia Mahindru awarded with **ADG's Commendation Card** by **ADG Maj. Gen. Rajiv Chibber** of PHHP&CHD Directorate on Aug 17,2022 for outstanding perform-ance and contribution of exceptional order in the field of 'Cadet Training and NCC Activities'.

Mrs. Urvashi Mishra Dean Student Council
Attended IP Awareness/ Training Programme under National Intellectual Property Awareness Mission, organized by Intellectual Property Office, India (Govt. of India) on July 29, 2022.

Attended Webinar on Authentication: Password & Beyond, organized by Bharti Vidyapeeth's Institute of Computer Applications and Management, New Delhi under IEEE Delhi Section on July 23, 2022.

Attended webinar on Cyber Security, Cyber Warfare and Cyber Citizenship on October 29, 2022 organized by BVICAM New Delhi (IEEE Delhi Section)

Student's Achievements

MASARRAT PARWEEN
(BCA Sem - 5) (40009)
Head Task Force
Secretary: Placement Cell
Joint Secretary: Holistic Development
Asst. Secretary: IPR Cell.

DEEPALI
(BSC IT Sem - 5) (41004)
Joint Head Girl UG
Secretary: Computer Club.
Secretary: Robotics Club
Joint Secretary: Discipline Committee

MUSKAN
(BCA Sem - 3) (41004)
Joint Secretary: Computer Club.
Joint Secretary: Robotics Club

HARSHITA SHARMA
(BSc IT Sem - 5) (41021)
Asst. Secretary: Task Force
Member Discipline Committee

NITASHA BHAGAT
(BCA Sem - 5) (40012)
Asst. Secretary: Discipline Committee
Member Task Force

Student's Achievements

PALAK KUMAR
(M. SC IT Sem - 3) (45153)
Joint Head Girl PG
Secretary: Red Ribbon Society.
Secretary: MOOCS Cell.

PALAK RANA
(BSc IT Sem - 5) (41005)
Member Task Force.
Member Discipline Committee

RIDHIMA SHARMA
(BCA Sem 1) (40219)
Asst. Secretary: Placement Cell.
Asst. Secretary: Student Welfare Cell
Member Task Force

ANUSHIKA
(BCA Sem 3) (40122)
Member Task Force

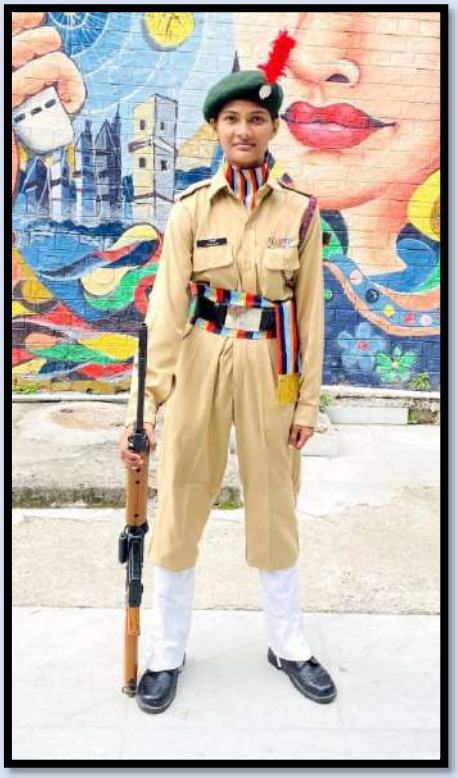
RIDHIMA
(BCA Sem 1) (40254)
Asst. Secretary: Computer Club.

ISHA ARORA
(BCA Sem 3) (40151)
Member Task Force

Student's Shinning in NCC, NSS, Sports

Muskan Kapoor of BCA Sem-5 is a very proud cadet of NCC Army wing who attended national level Trekking Expedition camp and Combined Annual training camps. Extended Guard of honour to Education minister, ADG & Group Commander. Active participant in 'Indian Swachta league'. Volunteered herself for Ex. Ncc Yogdaan during COVID.

CDT Isha Arora of BCA sem-4 NCC Air wing, attended combined annual training camp (catc-51, catc-56) at LPU, got the opportunity of flying. Joined aeromodelling where she learnt the making of models, also did flew with the control line model.



Himanshi of BCA sem-2 is a proud cadet of NCC Army wing who attended CATC competition also won Gold medal in Guard of Honor.

Sheetal of BCA Sem-5 participated in inter college Karate Tournament held at GNDU Amritsar and won gold in Kata, silver in Kumite and bronze in team kata.

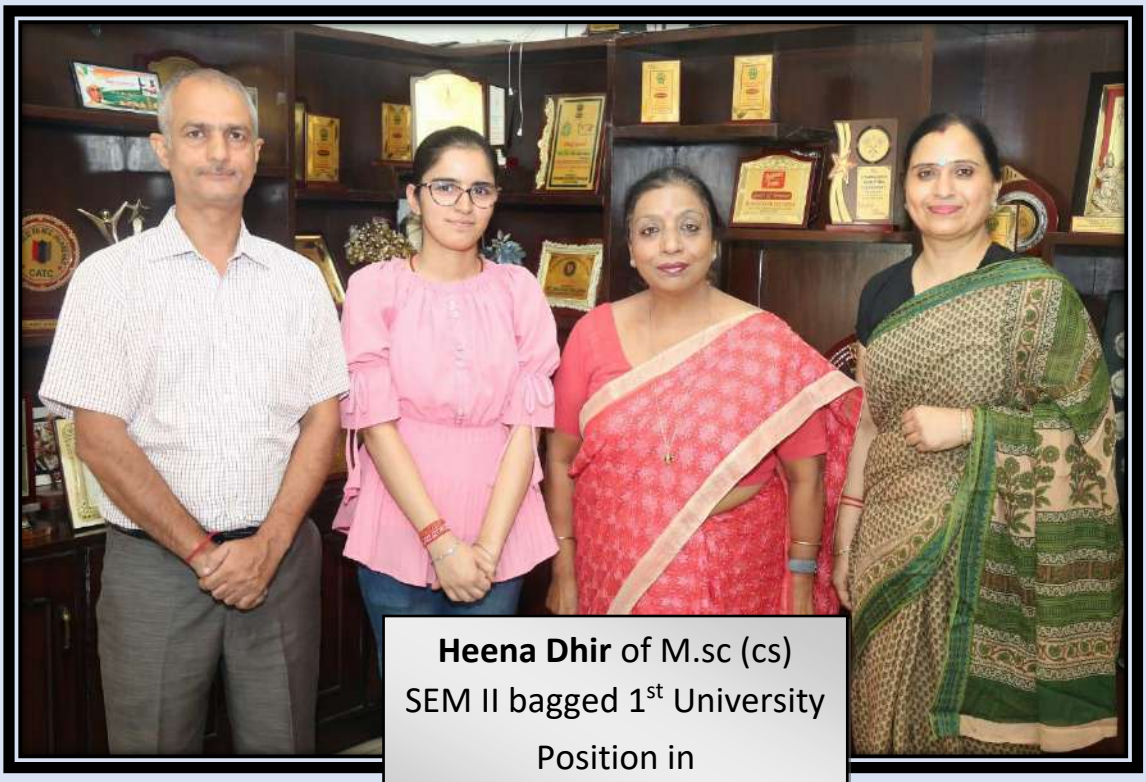
Students attended **7-Day NSS Special Camps** that included various activities like Segregation Survey, Cleanliness Campaigns, Rallies, Statues Cleaning, Natural Fertilizer Making and many competitions like Best out of waste, poem and poster making.

Students performing **Garbage Segregation survey**. (Ward-78)

Natural Fertilizer making and packing Activity

Cleaning of Botanical Garden of College

University Toppers



Heena Dhir of M.sc (cs) SEM II bagged 1st University Position in Examinations.

DEEPALI of BSc IT SEM-III bagged 2nd University Position.

Kumakshi of M.sc IT SEM I bagged 1st University

Diksha of MSc (CS) SEM III bagged 2nd University Position.

ANNE NEHA VAZ of MSc IT SEM-1 bagged 6th University position.

PRIYANKA SANDHU of Msc (CS) SEM-III bagged 8th position in the University.

PALAK KUMAR of MSC IT SEM-1 bagged 12th Position in University.

ISHA ARORA of BCA SEM-II bagged 13th position in the University.

University Topper's

BCA Sem 3
Isha Arora 1st in university

B.Sc (IT) Sem -1
Monika Devi 1st in university
Kashish 12th in university
Simran Sharma 16th in university
Himanshi 17th in university

BCA Sem -1

Kanchan 4th in university

Bhavya 5th in university

Gursimran 13th in university

Megha 13th in university

Smiley 14th in university

Suvidha 19th in university

Shubh 20th in university

Mehak 21st in university

B.Sc (IT) Sem -3

Komal 2nd in university

Jasmine kaur 5th in university

Palak Sharma 6th in university

Manpreet Kaur 11th in university

Akashdeep Kaur 12th in university

Tanu devi 15th in university

Student's Achievement

Students of BSc(IT) Sem -5 Deepali, Palak , Harshita and Mehak Bhatia of BCom Sem-5 showcasing their Problem statement on '**Virtual Tour to Indian Pilgrimages'**during **Smart India Hackathon 2022** held at shri Ramdeobaba college of engineering and management Nagpur on Aug 25-26, 2022.

Students of BCA Sem -5 Masarrat Parween, Nitasha Bhagat, Muskan Kapoor & Akshriti presenting their project in **'Mission Innovate Punjab'** Hackathon held at Amritsar.

Cultural Highlights

Students of BCA & Bsc.IT Participated in Vehra Shagna da- Lok Naach Mukabla.

Students of BCA & Bsc.IT Participated in Inter Department Dance Talent Hunt.

Departmental Highlights

Ranked **First** in Punjab in the Stream of **Sciences** by **' The Week Hansa Research Survey 2022 of Best colleges'.**

Departmental Highlights

Students of UG and PG participating in different competitions organized during celebration of **International Programmer Day** on Sep 13, 2022.

Resource Person Mr Gullagong addressing the students on **'Cyber Security'**.

Departmental Highlights

Students participated in the Science Week.

Stage Conduct by the students of our department on various events.

Special Day's

Fresher's Party 2022-23

Diwali Celebration 2022.

Our Proudly Placed Students

WIPRO: - Khushi Khanna (BCA SEM-6) [40011]

Ramnik Kaur (BCA Sem-6) [40016]

Deepali (Bsc IT Sem-6) [41004]

NIMBLE:- Nitasha (BCA Sem-6) [40012]

Kashish (BCA Sem-6) [40050]

Muskan Padam (BCA Sem-6) [40013]

AMAZON:- Masarrat (BCA Sem-6)[40009]

Muskan Sharma (BCA Sem-6) [40032]

ANSH INFOTECH:-

Paid Internship:-

Harshita Sharma (Bsc IT Sem-6) [41021]

Muskan Sharma (BCA Sem-6) [40032]

Unpaid Internship:-

Sejal (BCA Sem-6) [[40021]

Nitasha (BCA Sem-6) [[40012]

Akshriti(BCA Sem-6) [40003]

Avneet Kaur (Bsc IT Sem-6) [41019]

NEXT ART CREATION:-

Muskan Kapoor (BCA Sem-6) [40014]

Akshriti (BCA Sem-6) [40003]

Khushi Khanna (BCA Sem-6) [[40011]

Tabassam (BCA Sem-6) [40047]

Palak Rana (BSc IT Sem-6) [41005]

THE KNOWLEDGE ACADEMY:-

Deepali (Bsc IT Sem-6) [41004]

Palak Rana (Bsc IT Sem-6) [41005]

Harshita Sharma (Bsc IT Sem-6) [41021]

Masarrat (BCA Sem-6) [40009]

Nitasha (BCA Sem-6) [40012]

Muskan Kapoor(BCA Sem-6)[40014]

Akshriti (BCA Sem-6) [40003]

Khushi Khanna (BCA Sem-6) [40011]

Sheetal (BCA Sem-6) [40015]

Rimpi (BCA Sem-6) [40018]

Muskan Padam (BCA Sem-6) [40013]

Ritika (BCA Sem-6) [40044]

Simran (BCA Sem-6) [40046]

Kashish (BCA Sem-6) [40050]

Ramnik (BCA Sem-6) [40016]

Manpreet (BCA Sem-6) [40001]

Renu (BCA Sem-6) [40020]

MIDLAND MICROFIN:-

Muskan Sharma (BCA Sem-6) [40032]

Sejal (BCA Sem-6) [40021]

Sheetal (BCA Sem-6) [40015]

Rimpi (BCA Sem-6) [40018]

Khushi Khanna (BCA Sem-6) [40011]

Harshita Sharma(Bsc IT Sem-6) [41021]

Editorial Board

HANS RAJ MAHILA MAHA VIDYALAYA

Mahatma Hans Raj Marg, Jalandhar (Punjab) India
Ph.: +91-181-2253710, 2204198
Web: www.hrmmv.org E-mail : hmv_jal@yahoo.co.in