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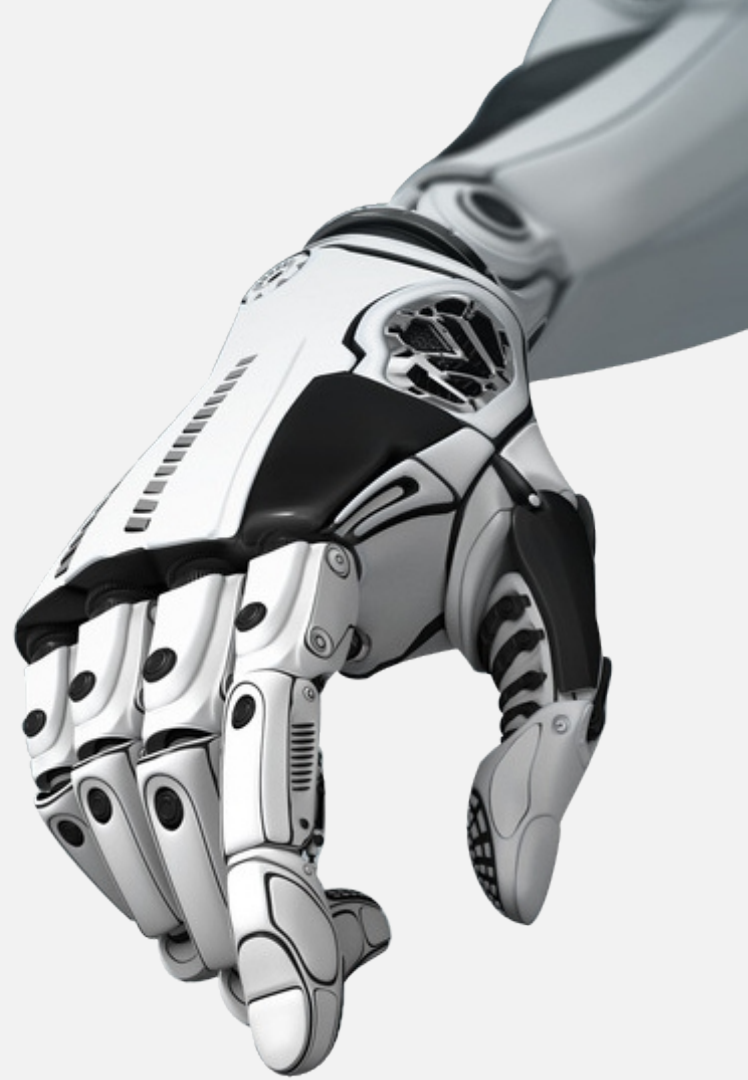
CHITKARA

# WALL OF ALL

DEPARTMENT OF COMPUTER APPLICATIONS
CHITKARA UNIVERSITY INSTITUTE OF ENGINEERING & TECHNOLOGY
CHITKARA UNIVERSITY, PUNJAB

# Contents

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Dear Readers,

The nostalgic feeling that one experiences while sifting through the dusty old pages of the college magazine cannot be expressed in words. However, very few of us have retained those copies, and most of those precious articles that we wrote during those golden days with enthusiasm are lost forever. With the advent of e-books and other online media, the days of paper-bound college magazines are gone, and the digital platform has paved way to allow retention.

Wall-for-All, the e-Magazine published by the Department of Computer Applications, is one such effort that was started with an intent to provide achance to all students and faculty members to share their thoughts and knowledge, and hone their skills in creative writing.

I am happy to see the enthusiasm of eminent members of the department to contribute to Wall for All. This shows the positive and creative energy of the contributors. However, it would be really wonderful if we can see the articles contributed by more students in the next editions, for this e- Magazine is intended to be a writing pad for each member of the department.

**I proudly present the current edition of Wall for All.**

**Dr. Jaiteg Singh**
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# Getting Started on YouTube

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Since the beginning of the lock down the number of creators on YouTube has risen to an enormous number but only a handful of them have been able to become successful. Many people started their YouTube channel as a side source of income but could not monetize it due to less subscriber count or other factors.

Today I am going to share some professional insights for new creators on YouTube. If you are thinking of kick-starting a new YouTube channel and begin everything from scratch then just ask yourself a question – Why do I want to start a YouTube channel? First get the answer to this question. Ask yourself again and again and try to understand what you think of your channel in the coming 3 years. Do you dream of making a great impact or becoming a millionaire with it? Once you have got the answer of your first question then think of what kind of a channel do you want? Select the genre. Will it be entertainment, learning, music, gaming or what? This question will be answered by your talent and your skill. There would definitely be a talent that you would showcase on your channel and that talent will define your genre.

After you have defined your genre then define your audience. These steps might seem to be a waste of time or so but it isn't. Me being a creator for the past 1 year feels that if I would have known these things at that time, it would have helped me a lot. Coming back, your audience can be defined by you. For example, if you are starting a learning channel that deals with school education, your audience would be school students. If you start an entertainment channel your audience will be of any age.

Now define your content. It would be defined by your audience. If your audience is children and your channel's genre is learning then your content should focus on providing more information in less time in an innovative way. If your channel's genre is gaming then try making videos on some tips for gaming or teaching people how to play with two fingers, how to play with four fingers or how to play like a professional on a console? Another type can be with funny commentary or collabs with other Youtubers.

Now if you are done with these questions, you are now clear with your content now you have to focus on creativity. Remember creativity is the key to grow on YouTube.

There is a famous quote, "To be successful in a field either be the first or be the best." Being the best is a rare chance so focus on being the first. Try making new types of videos by adding your own style and mixing some humor. People always want to enjoy things and always want to be happy and one way to make them happy is by adding humor to your videos. It can be in any way. Such as you could adopt a funny way of speaking in videos, mimic funny cartoons like shin Chan etc. or crack jokes.

If you are thinking of starting a learning channel then try to pour animations, graphics etc. that would enhance the learning of the learner. People with entertainment channels can make plays, or comment on daily life activities that seem to be funny or comment on other youtubers content WITH THEIR PERMISSION. Beware of copyrights. Do not copy content. There are two types of copyrights.

One is claim and other is strike. The owner of the content can choose to impose any. A copyright claim just demonetizes your video or in the worst case it can even be removed. When a strike is imposed, your content is removed immediately.

Also, you receive a warning from YouTube. If your channel receives three strikes, your channel can be permanently removed. So, if you are commenting on someone else's content do not forget to have their permission to avoid such infringements. Entertainment genre can also include vlogs. Now vlogging is a thing that has been ruined by many cringe creators. A vlog should not be fake, and just showing off.

It should be original and should do some value addition in the lives of the audience. For example, if you are visiting a place and making a vlog on that, then provide some information about the mineral resources, wildlife resources, about their military power, or economic conditions etc. these things would definitely add some value in the audience's lives. When you are recording your content don't think that you are speaking to a camera, think that you are talking to some live audience in front of you. That would help you connect with your audience better and help them develop a friendly relationship.

Spend some time on editing the videos. Don't just record and post them. Embed some graphics, apply some sound effects, and highlight the important parts of the video. These practices would help your videos grow a lot. Ensure good lighting while recording. The video should not be dark and blurry. Your face should be clearly visible (if you show it). Ensure a good background. Select a background that soothes the eyes of the audience and also suits your content. It should be well painted, well decorated and should look good. If you don't have such a background then just try making the background in the frame look good.Gamers can use green screens to show their computer screen along with their face. Ensure that your room doesn't echo your sound.

If it does then try adding things that absorb sound such as curtains, small plants or stuff which stops the echo. If you are a gamer then select a good streaming software that gives you various elements. One of the best streaming software that I recommend is Streamlabs OBS.

You can use your phone's camera to record videos initially if you don't have the resources to buy a good camera. Try investing in audio first cause if audio is not good, the audience would not see your video. So first invest in good audio equipment and then invest in a good camera and lights etc. do not forget to add a good intro and outro that would grab the audience's attention. Remember to have at least 2 videos in stock if you post on a regular or weekly basis. It would help you maintain the flow even if you couldn't record videos for some time due to any reason. Remember to give quality importance over quantity.

Now your content part is done. Now you are ready to rock on YouTube. So, to post your videos you need to create a channel. To create a channel, you need to create a Gmail account. After creating that account go to YouTube. Click on the profile button, sign in with the account you created for your channel. Click on your channel option and after specifying the name and profile pic click on the create option. Your channel has been created. Select a name that talks about your content. The name should tell the viewer about the genre of your content. Prefer a name of maximum 3 words and also try to devise a short form of that name that is not used by anyone else.he name should also be unique that is not used by anyone else otherwise your channel may not be shown when you search.

Try providing a good description that talks about your channel, yourself and your content. Try providing your social media handles links in the links section. Also provide a business email that would help you in collabs, promotions and other stuff like this.Create a good logo and channel art that attracts the attention of the audience.

Remember to remove the subscriptions part in the featured channels area because that is not appreciated much. Now you are ready to post videos. You can post videos via your mobiles and your computers also. To post from mobile, go to the YouTube app click on the middle button in the bottom strip of the interface that shows a '+' sign. Click on the upload video option and then proceed. To upload from a computer, visit the YouTube Creators website, click on the upload videos option and proceed as said by the platform. Be wise at defining whether it is made for children or not.

Videos made for children do not have features of commenting etc. select whether it is made for adults or not. Try adding tags. Tags improve search results and help your videos come on top in search results. Add cards of your best videos, best playlists, videos like the one you posted etc. Try adding captions that would help people understand your voice better. It attracts an audience of other linguistic groups. Add a suitable title that attracts the audience. Add a description that contains a fair summary of the video with important social media links. Structure your videos in playlists and groups.

This enables your audience to find videos in an easy and efficient manner. Create a good and catchy thumbnail that talks about the video. Never make a clickbait. If YouTube finds your video to be a clickbait, strict actions can be taken.Use the features of the creator studio to the fullest to track your progress. Use the analytics section to check which kind of videos perform the best and try making more such videos. Try checking the audience retention and figuring out which parts of the video perform the best.

Commenting, liking, subscribing increase the audience engagement so try and ask the audience to do these things. Take suggestions from the audience for the upcoming videos. Take suggestions for improving content. Connect with them through comments and other social media platforms. Try live streaming and answering their questions. Post bits of your content on other platforms. Use the community tab to post updates and interact with the audience.

Try reinvesting the income generated back into the channel by updating equipment, expanding your team, purchasing better software etc.

this would help your channel grow to limitless heights. Finally, I would just like to say that there are three keys of success on YouTube, those keys are originality, creativity and consistency. Do not get demotivated if you do not get desired subscribers and views because no one gets an overnight success, it takes a deal of daily hard work.

Hope this article helps you in yourYouTube journey!
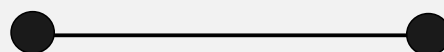
## Call for Articles

At Chitkara University, the endeavor has always been to hone the skills of learners. Keeping in line with this tradition, the Department of Computer Applications, Chitkara University, Punjab had come up with an online magazine titled Wall for All. This magazine was proposed to provide a platform to the budding learners to share their knowledge and general information pertaining to the computing field. Wall for All is available for free download in PDF format from CA departmental website: ca.chitkara.edu.in.

The students and faculty members are invited to be a part of this venture and contribute their articles to the magazine. The students may forward the articles through their respective mentors while faculty members may send the same directly to the editors of Wall for All.

# Scaled Agile Framework (SAFe): The Beginning

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SCALED AGILE FRAMEWORK (SAFe) is a suite of various patterns to guide the enterprises in three practices i.e. scale, lean and agile. In today's era where technology is growing at a rapid speed, a business must also be aligned with the technology to be at par in this competitive edge. Companies are trying hard to come up with the current situations by using agile principles yet they are finding it hard to sustain. Fortunately, the organizations have found an effective solution to it: SAFe. This framework not only integrates scale, lean and agile development but also successfully coordinates the work done at various levels: program, team, portfolio, and stream. To understand SAFe one must have prior knowledge of the following practices: Scaling which means that scaling of innovations for a bigger, better, and widespread usage. It is the last step towards piloting or proof of concept development and has the following three dimensions:

| Scaling Out | Scaling Up | Scaling Down |
|---|---|---|
| Involves expanding the geographical spread, or reach, of a technology or practice over time. | Entails creating the necessary social and institutional preconditions for scaling out to happen efficiently. | Deals with the notion that sustainable and transformative impact is achieved only "when people's hearts and minds, their values and cultural practices and the quality of relationships they have are transformed" |

**Figure 1: Three Dimensions for Scaling**

Lean means aligning the manufacturing principles to the software development domain. Adapted from the Toyota Production System, this practice depends upon seven principles: Eliminate waste, Amplify learning, Decide as late as possible, Deliver as fast as possible, Empower the team, Build integrity in, Optimize the whole. Agile development improves the solutions through the collaborative effort of self-organizing and cross-functional teams along with the customers and end-users. Figure 2 represents the framework as an integration of multiple areas including and not limited to enterprise solution delivery, lean portfolio management, agile product delivery, team, and technical agility, and continuous learning culture.



**Figure 2: SAFe 5 Framework for Lean Enterprises (scaledagileframework.com)**

In software development industry, SAFe is the need of the hour as it offers various benefits like reduced time to market, provides collaboration between geographically spread multi-disciplinary teams and gives value to the customer is lesser time.

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# Cyber Security

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Cyber crime is a crime which involves computer and internet so to protect ourselves from such crimes, we need cyber security. Cyber security means protecting data, networks, programs and other information from unauthorized or unattended access, destruction or change. In this era where the use of computers has become common, cyber security is a major concern.

The rapid development of Technology and the availability of the internet to most of the public, has become commonplace, cyber security is a major concern. The rapid development of Technology and the availability of the internet to most of the public, has broadened the pathway of cybercrime.



Cyberspace has expanded dramatically in its existence due to rapid development of information technology (IT). Advances in information and communications technologies have revolutionized the scientific and commercial infrastructures developed by the government. The IT infrastructure has become an integral part of the infrastructure which supports national capabilities such as energy, power grids, telecommunications, emergency communication systems, financial systems, defence systems, space, transport, land records, public essential services and utilities, law enforcement and security and air traffic control networks etc.
All these infrastructures increasingly depend on data for communication and commercial transactions. The stability and security of critical information infrastructure is vital for the security of

There is a different form of Cyber attacks like viruses, Malware, spyware, phishing, ransomware, fraud etc.

There is a different form of Cyber attacks like viruses, Malware, spyware, phishing, ransomware, fraud etc. Clicking infected web pages, malicious websites, links or unintentionally downloading a dangerous program also allow hackers to gain illegal access to other computer systems. According to report, India Steel ranks higher than Global peers as there are 54% Malware and ransomware attracts in India as compared to 47% globally. Yahoo also acknowledges that in India 3 billion accounts were breached in 2013.

Lack of cybersecurity is also a reason for some brutal terrorist attract like 26/11, 9/11 in America, Mumbai bomb blast act. This cyber security plays a key role to prevent some heinous and perilous crime like leakage of personal information, blackmailing fraud transaction through another account.

Our government has taken some Stern steps to improve the cyber security of India through National cyber security policy 2013, launched cyber swachhta Kendra in 2017 and established much cyber crime police station.



The evolving nature of the telecommunications infrastructure poses further challenges. The expanding wireless connectivity to individual computers and networks is making determination of physical and logical boundaries of networks increasingly difficult.

Exposing people's personal lives have become a hobby for a bunch of criminals in various parts of the world. People do not find it completely safe to visit various places for the fear of being taped over. Motive of computer crime is to intentionally harm the reputation of the victim or cause physical or mental harm to the victim directly or indirectly, using modern telecommunication networks such as Internet (Chat rooms, emails, notice boards and groups) and mobile phones (SMS/MMS).It depresses victims to depression, at times even death.

Today due to high internet penetration, cybersecurity is one of the biggest need of the world as cybersecurity threats are very dangerous to the country's security. Not only the government but also the citizens should spread awareness among the people to always update your system and network security settings and to the use proper anti-virus so that your system and network security settings stay virus and malware-free. The increasing inter connectivity and accessibility to computer based systems that are critical to the country's economy are adding to the risk.

## Five Tips to Make Your Internet Usage More Private and Secure

Better be safe before getting hacked

### #1 Use Strong Passwords
- Never use a word or numbers that someone can associate with you: first, middle or last name, a spouse or child name, date of birth, phone number etc.
- Mix up the letters caps numbers and use symbols.

### #2 Browse Safely by Ensuring Encryption
Check out two things on your web address bar before opening any website:
- Trusted security lock symbols
- The extra "s" at the end of HTTP in your web address bar.

### #3 Install Security Suits
Some of the popular security suits include:
- Avast antivirus
- Norton antivirus
- McAfee virus protection
- AVG Internet security

### #4 Turn on Web Browser Blacklisting
- Many web browsers have additional security options such as blacklisting.
- This allows you to set the criteria for sites you will be navigating.
- Only trusted sites will be available to visit.

### #5 Avoid Phishing Scams
- Never open emails or attachments when the sender is unknown.
- Don't click on unsecured links from unknown emails.

# How Technology Hijacks Human's Brain?

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Technology is an aspect that dominates the globe. At the break of the dawn when the world rises, the speed of internet connectivity augments by a hundred folds. Technology is the reason behind the solution to every problem and also the problem of the masses. Like every coin has two sides, Technology comes bearing the same. While technology has been used to reach out to people all over the world like the media, entertainment, online forums and web browsers. Technology also backfired when these very gadgets and sources took a toll on the physical and mental health of the users.

People choose a sedentary lifestyle over an active lifestyle because everything is delivered at our doorstep which makes technology the most cogent option for us. At the touch of a finger we can nuke nations and destroy the ecological balance of this ecosystem. In a very passive manner the tool of technological advancements is hijacking the human mind. Scientifically it all begins like a boiling frog analogy where addiction seems too comfortable to drop and by the time we realize the ramifications of the actions it is too late. Technology affects the cerebellum of the human mind, numbing it of emotions like presence of mind, thoughtfulness and triggers emotions like hate, cussing and usage of profane words.

Technology steers what 2 billion people are thinking and believing every day. It's possibly the largest source of influence over 2 billion people's thoughts that has ever been created. Religions and governments don't have that much influence over people's daily thoughts. But we have three technology companies who have this system that frankly they don't even have control over—with newsfeeds and recommended videos and whatever they put in front of you—which is governing what people do with their time and what they're looking at.

If we're talking about just phones, then we're talking about Apple and Google because they design the operating systems, the phone itself, and the software in the phone. And if we're talking about where people spend their time on the phone, then we're talking about Facebook, YouTube, Snapchat and Instagram because that's where people spend their time.

Just to reiterate, the problem is the hijacking of the human mind: systems that are better and better at steering what people are paying attention to, and better and better at steering what people do with their time than ever before. These are things like "Snapchat streaks," which is hooking kids to send messages back and forth with every single one of their contacts every day. These are things like auto play, which causes people to spend more time on YouTube or on Netflix. These are things like social awareness cues, which by showing you how recently someone has been online or knowing that someone saw your profile, keep people in a panopticon.

The premise of hijacking is that it undermines your control. This system is better at hijacking your instincts than you are at controlling them. You'd have to exert an enormous amount of energy to control whether these things are manipulating you all the time.

According to the recent reports published by the University of Oxford, addiction to technology has led to shapeshifting the views and opinions of the masses to an unstable session. The uncertainty of employment opportunities for the youth has directed their energy to the reel world and infested the minds with plausible deniability. But as we talk about hijacking people's minds we cannot forget how this hijacking has led to providing solutions to evade conflicts just by pressing a few clicks. It has also hijacked the minds whilst providing them information anytime, anywhere.

"A game of clicks" as described by Elon Musk technology is how we want to put it to use, how we determine it's carte blanche, and how we determine to narrow down the tendency of fauxpas .Energy companies have the same perverse dynamic: I want you to use as much energy as possible. Please just let the water run until you drain the reservoir. Please keep the lights on until there's no energy left. We, the energy companies, make more money the more energy you use. And that was a perverse relationship.

The same way technology functions only just by draining all the human resources.the subtle psychological tricks that can be used to make people develop habits, such as varying the rewards people receive to create "a craving", or exploiting negative emotions that can act as "triggers". "Feelings of boredom, loneliness, frustration, confusion and indecisiveness often instigate a slight pain or irritation and prompt an almost instantaneous and often mindless action to quell the negative sensation".

Tech companies can exploit such vulnerabilities to keep people hooked; manipulating, for example, when people receive "likes" for their posts, ensuring they arrive when an individual is likely to feel vulnerable, or in need of approval, or maybe just bored. And the very same techniques can be sold to the highest bidder. "There's no ethics".  A company paying Facebook to use its levers of persuasion could be a car business targeting tailored advertisements to different types of users who want a new vehicle. Or it could be a Moscow-based troll farm seeking to turn voters in a swing county in Wisconsin.
Technology isn't blasphemy but a measure of choices and opinions, if carefully made can evolve us; if not we just invited cosmic annihilation of the human race.
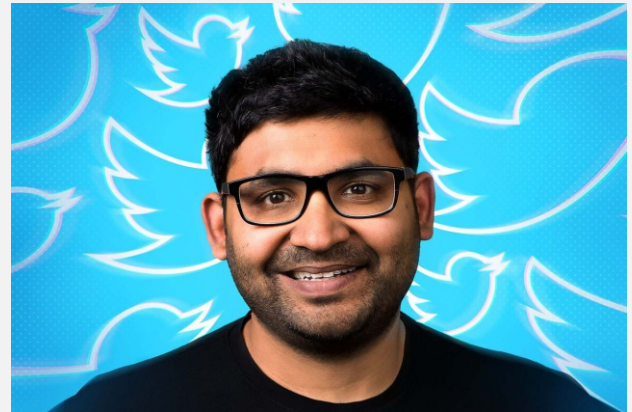
**Parag Agrawal (CEO, Twitter)**

**Who is Parag Agrawal? Jack Dorsey's successor on Twitter.**

India-born Parag Agrawal, who until November 29, 2021 was the chief technology officer at Twitter, has succeeded co-founder Jack Dorsey as the chief executive officer of the social media giant. He joined Twitter as a software engineer in 2011 and became the chief technology officer in 2017. He was born in Ajmer, Rajasthan. Later on his family moved to Mumbai. His father was a senior official in the Indian Department of Atomic Energy and his mother is a retired Economics professor from Veermata Jijabai Technological Institute (VJTI), Mumbai. He obtained his B.Tech degree in computer science and engineering from IIT Bombay in 2005. He completed his PhD in computer science from Stanford University. Agrawal held research internships at Microsoft Research and Yahoo! Research prior to joining Twitter as a software engineer in 2011. He's is receiving an annual salary of $1 million-plus bonuses.

# Impact of Information Technology on Healthcare

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It's amazing to look back and see just how far our world has come technologically. Whether it is the business world, the educational industry, our homes, the medical field, or any other aspect of our lives, the impact is phenomenal. Technology has brought about a massive and welcome change to the healthcare industry. Additionally, the availability of newer treatment technologies leading to better outcomes has enhanced the quality of life of the patients as well. Digital technology has greatly improved operational efficiency with respect to standards of medical care. Today, we will discuss how this advancement in technology has affected the healthcare sector specifically. Has it made it better or has created some more problems? Let's take a deeper dive into whether technology is a boon or a bane for the healthcare sector.

Some of the areas where digital technology has made an enormous impact in healthcare include:

## Better Patient Care
Taking care of patients has become significantly easier thanks to technology. Devices such as pacemakers, health trackers, and many others make it very easy for users to track their personal health. Moreover, modern equipment available in hospitals has helped increase life expectancy. Major surgeries that were previously impossible are now manageable with the help of equipment such as Capsule Endoscopy cameras, which can be easily swallowed by a patient. The camera can then be monitored by doctors to identify any issues inside the body. In the case of any problems arising, the data monitored through these devices can easily be communicated to doctors who can diagnose what is wrong with a patient even remotely.

## Telehealth and Telemedicine
This technology is applied to the healthcare system to overcome distance barriers and facilitate critical care in emergency situations; potentially saving lives.

Telehealth and Telemedicine are the next evolution in the world of healthcare. Now patients can easily get in touch with their doctors from anywhere in the world. There are a number of great. Telehealth platforms that can help patients get the help they need at just the right time from the comfort of their homes. This can significantly reduce waiting time for patients.

## Electronic Health Records
Electronic Health Records (EHRs) replacing outdated paper records has been a massive game-changer for everyone in the medical world. Electronic Health Records (EHRs) consist of digital summaries of a patient's medical records. They could include diagnoses, lab reports, and details about hospital stays, surgical interventions, and prescriptions. EHRs also enable faster, smoother and easier medical billing. . When properly maintained and implemented, EHR protocols can also help increase accountability and reduce malpractice. They make life easier for medical accountants and reduce the chance of mistakes being made.

## Improved Lines of Communication
Today, digital technology has made communication between healthcare providers and patients very easy. Healthcare workers can stay in touch through email, smart phones, text messaging etc. Also, medical professionals can make their own webinars, videos and use online platforms and social media to communicate with other professionals.

## Mobile App Technology in the Medical Field
Health and fitness apps help people get healthier. These apps enable patients to monitor their health and disease, provide them medical information, allow them access to test results and prompt them when it is time to get their check-up. Doctors can communicate directly with their patients, record their vital signs accurately, maintain logs about visits and consultations, and achieve greater procedural efficiency.

## Personal Health Devices are Hack-able

While technology may have help to improve the healthcare sector overall, it also has some adverse impacts. For instance, personal health devices that are designed to maintain the health of patients can be damaging as well. The modern medical devices mostly rely on the concept of IoT to function. These devices can be sometimes accessed by unauthorized parties to cause harm to a patient. While these devices are meant for good, they can be accessed and hacked, if not secured, for harmful purposes. While technology may have helped the healthcare sector, it has also brought a set of new problems for healthcare professionals and society in general as well.

## Big Data and The Cloud

'Big Data' refers to enormous amounts of data that are collected, processed, and used for analytics. It helps to reduce healthcare costs. It predicts from epidemics. It avoids preventable deaths. It helps to improve the quality of life. It improves efficiency and quality of healthcare. It develops new drugs and treatments. The Cloud then uses hardware and software to deliver services across the internet. Healthcare professionals and patients are both able to access certain data and use applications from any internet-enabled device – anywhere in the world.

## Conclusion

Having discussed all this, we would just like to say that everything in life has two sides to it. If we want to take advantage of technology, we have to balance both the pros and cons. While technology may have helped the healthcare sector, it has also brought a set of new problems for healthcare professionals and society in general as well. Technological developments are better adopted into the healthcare fields in some parts of the world than others. Developed nations have been able to harness technology more efficiently for improved patient care; however, developing nations are catching up quickly. Healthcare providers who haven't yet adopted the tools technology places at their disposal are realizing their vast untapped potential and are making the changes and the investments required to streamline processes, lower costs, increase efficiency and most importantly, to improve quality of care.

## Top Unicorn Startups in India as of 2021

| BharatPe | Headquarters |
|---|---|
| BharatPe is an Indian digital payments app, merchant aggregator, and payments platform that encourages digital payments via QR and POS. | New Delhi **Valuation** $2.85 Billion **Founders** Ashneer Grover, Bhavik Koladiya, Shashvat Nakrani **Founded Year** 2018 |
| **Mindtickle** | **Headquarters** |
| Mindtickle is a sales readiness platform, which helps in onboarding, product training, coaching, and ongoing readiness. | San Francisco, U.S **Valuation** $1.2 billion (August 2021) **Founders** Deepak Diwakar, Krishna Depura,Mohit Garg, Nishant Mungali **Founded Year** 2011 |
| **upGrad** | **Headquarters** |
| upGrad is an online coaching program for all students opting for higher education. | Mumbai, India **Valuation** $1.2 bn (August 2021) **Founders** Mayank Kumar, Phalgun Kompalli, Ravijot Chugh, Ronnie Screwvala **Founded Year** 2015 |
| **coinDCX** | **Headquarters** |
| coinDCX is an Indian cryptocurrency exchange aggregator based in Mumbai. The company specializes in crypto-enabled financial services. coinDCX aims to develop financial services without any borders to enable a simpler and seamless flow of capital powered by impregnable security. | Mumbai, India **Valuation** $1.1 billion **Founders** Neeraj Khandelwal, Sumit Gupta **Founded Year** 2015 |

# Information Technology- Boon or Bane

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Technology is a word with a wide concept. It could not be explained in few words. It has been helping us in making our life a more convenient one. Day by day we are being introduced to newer technologies thereby replacing the older ones. It is the modern era and the people are tech-savvy. Technology has become an important part of everyone's life and thus has reduced the complexities. It is very difficult to imagine our life without these technological tools.

Technology can be defined as an application of science. It is not similar to science but both technology and science are interrelated words. Technology is the idea or creativity turned into practicality thereby resulting in the development of a device or machinery. These devices or machinery helps in reducing the complexities of work and make it easier. Technological advancements have taken place in different fields like industrial, domestic, medical, agricultural, education, manufacturing, etc. We are totally dependent upon these technologies to fulfil the requirements of life.

## How is Technology Helpful in Education?

Technology has totally changed the way of teaching and learning. The blackboard, chalk, and dusters have been replaced by the smartboard and smart classes. The invention of computers has brought a revolutionary change in our life. Today thereare different models and advanced forms of computers available in the market like laptops, ipads, notebooks, smartphones, etc. Teaching has become easier as the videos and images related to different topics can be shown to the students along with teaching. This makes it easy for the students to understand the relevant topic. Teacher's nowadays can easily communicate with the parents and keep them updated on their child's performance.

In colleges, students are asked to bring laptops, especially in professional courses. It is easier to carry a laptop instead of a heap of notebooks. Many universities have started online examinations for students.

The earlier pen and paper-based competitive exams have been replaced by the online mode of examination. Thus it can be stated that all things are possible because of the advancing technological tools. Nothing could be made easier without the emerging technologies.

## Positive Aspects of Technology

Technology has totally changed the way of our living standards. If we trace back to the period of evolution of human beings we can observe that slowly and gradually everything has changed. The positive aspects of technology are enlisted below.

## Reduces the Workload

The development of technologies has made our life relaxed and comfortable. We can easily complete different tasks in reduced time without wasting our energy. We cannot live without refrigerators, fans, washing machine, gas stoves, air conditioners, etc. Moreover, everything we use in our everyday life involves the use of technology.

## Saves Time and Effort

Earlier in the offices there were no computers and the calculations and account maintenance works were performed manually. The manual working process required a lot of time and energy. The development of computers has become a boon. Today there are computers in every office and they can store a large amount of data and information. The calculations can be easily performed in seconds. Technology has certainly reduced the time and effort of the people.

## A new light to the field of Medicine

Technology has given new hope to the field of medical science. The mortality rate due to diseases was higher in the past as there were no such devices to diagnose the disease and no cure for the serious diseases. This situation has been changed by the development of several devices that can easily diagnose the disease. This owes to technology and science.

The cure is also available now for different incurable diseases. The researches and experiments are still continued to get the remedy for incurable diseases.

## Cashless Transactions
We all are well aware of online transaction applications like Paytm, BHIM UPI, Google pay, etc. Using these applications we can make online payments anywhere instead of paying cash. This has been made possible because of the information technology. Cash needs to manage well as there is a fear of theft. These technologies encourage cashless transactions rather than paying by cash.

## Enhanced Communication
The whole world is at our tips. Technology has made it easier to communicate with people staying anywhere on the globe. The distances now do not matter as we are connected by technology. It has enhanced the ease of business. Business meetings can easily be conducted by video conferencing. Now there is an ease of Trade between different nations by such technological advancements.

## Made Learning Easier
Technology aids in learning as we can get the information and updates of the whole world just with a single click. The online mode of learning helps in making studies possible for the students of remote areas with no access to schools.

## Negative Aspects of Technology
Causing Pollution - The advancing technology is also responsible for the rise in the pollution level on earth. The invention of different types of vehicles, air conditioners, and thermal power plants release the gases that are harmful as well as the cause of air pollution. The heap of electronic devices gives rise to E-waste. Overall there are some disadvantages of every emerging technology and it is a serious concern.

## Safety Issues
Access to social media via computers is a great way to know about the people of the world and their ideas. The use of computers can become dangerous too if our personal information is leaked and misused. Many times the details of our account are hacked and we have to suffer from the insignificant loss.

Thus the technology is useful but can also lead to serious issues like hacking, identity theft, stocking, cybercrimes, etc. that impose threats to our security.

## Decreasing the capabilities of Students
The students are benefitted as they can get any kind of information they require with just one click. This has reduced the capability of searching and imagination in the students. This way of learning is ineffective as it reduces the analysing and memorizing power in students.

## Destruction and Warfare
Several deadly weapons, biological weapons, and explosives can be created by using technology. There are some sharper minds who are involved in making these technologies a tool for the destruction of the world.

## Conclusion
Technology is easy to be spelled of but has a very vast explanation. Its application has changed our life from nomadic dwellers to civilized people of today. The day is not so far when artificial intelligence will excel and the role of the human being will shrink just as the slaves of technology. It totally depends upon us that how we will be utilizing the same.

# Impact of Machine Learning on Agriculture

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## What do you mean by Machine Learning?

It is the field of study that gives computers the capability to learn without being explicitly programmed. As it is evident from the name, it gives the computer that makes it more similar to humans: The ability to learn. This is actively being used today in many more places than one would expect.



## Machine Learning Technique

In general, machine learning algorithms are divided into two groups: generative models and discriminative models. Various supervised machine learning techniques are employed in this study to analyse activity recognition. Depicts the relationship between artificial intelligence and machine learning. As a result, Naive Bayes, kNN, and SVM exhibit a higher capacity to properly recognize the activities. The Naive Bayes method is a generative model, whereas kNN and SVM (Radial Bias and Polynomial) are discriminative models.

**Naive Bayes** is a classification algorithm that is suitable for binary and multiclass classification. It is a supervised classification technique used to classify future objects by assigning class labels to instances/records using conditional probability. In supervised classification, training data is already labeled with a class. For example, if fraudulent transactions are already flagged in transactional data and if we want to classify future transactions into

fraudulent/non-fraudulent, then that type of classification would be called supervised.

**(KNN) K-Nearest Neighbours** is one of the most basic yet essential classification algorithms in Machine Learning. It belongs to the supervised learning domain and finds intense application in pattern recognition, data mining and intrusion detection.

It is widely disposable in real-life scenarios since it is non-parametric, meaning, it does not make any underlying assumptions about the distribution of data (as opposed to other algorithms such as GNN, which assume a Gaussian distribution of the given data).

**Support Vector Machine (SVM)** is a relatively simple Supervised Machine Learning Algorithm used for classification and/or regression. It is more preferred for classification but is sometimes very useful for regression as well. Basically, SVM finds a hyper-plane that creates a boundary between the types of data. In 2-dimensional space, this hyper-plane is nothing but a line.
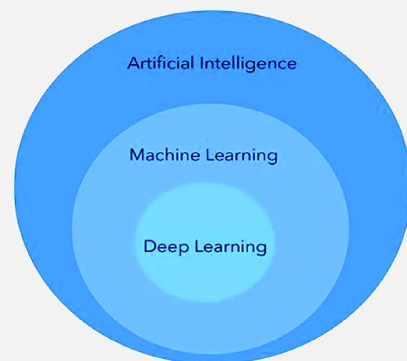


In SVM, we plot each data item in the dataset in an N-dimensional space, where N is the number of features/attributes in the data. Next, find the optimal hyperplane to separate the data. So by this, you must have understood that inherently, SVM can only perform binary classification (i.e., choose between two classes). However, there are various techniques to use for multi-class problems.

## Impact on Agriculture

Agriculture is important to the country's economy since it feeds the whole population. It links and interacts with all of the country's relevant enterprises in this way. A country is considered socially and economically prosperous if it has a sufficiently large agricultural basis. In the majority of countries, agriculture is the primary source of employment. Large farms usually require the hiring of extra workers to help with planting and farm animal care. The bulk of these huge farms have close processing plants where their agricultural products are processed and developed. Machine learning's adaptability, promotion, and reduced costs helps in assessing the complicated link between the input and output of agricultural systems utilizing analytical approaches that are characterized by non-linearity, time variable features, and numerous unknown elements.

Agricultural research has benefited from technological advancements, particularly byincorporating industrial advances into a sustainable agriculture production system. By electrifying every farming procedure, technology has transformed farming into a viable business. This saves the farmer money and eliminates the middleman who buys low from farmers and sells high to end consumers. Recent applications of computational intelligence techniques provide solutions to site-specific decision modelling problems in agricultural systems. Applications of machine learning and artificial intelligence in agriculture sector are listed as follows:

## Species Breeding

Our favourite, this application is so logical and yet so unexpected, because mostly you read about harvest prediction or ambient conditions management at later stages.

Species selection is a tedious process of searching for specific genes that determine the effectiveness of water and nutrients use, adaptation to climate change, disease resistance, as well as nutrients content or a better taste. Machine learning, in particular, deep learning algorithms, take decades of field data to analyze crops performance in various climates and new characteristics developed in the process.

Based on this data they can build a probability model that would predict which genes will most likely contribute a beneficial trait to a plant.

## Species Recognition

While the traditional human approach for plant classification would be to compare color and shape of leaves, machine learning can provide more accurate and faster results analyzing the leaf vein morphology which carries more information about the leaf properties.
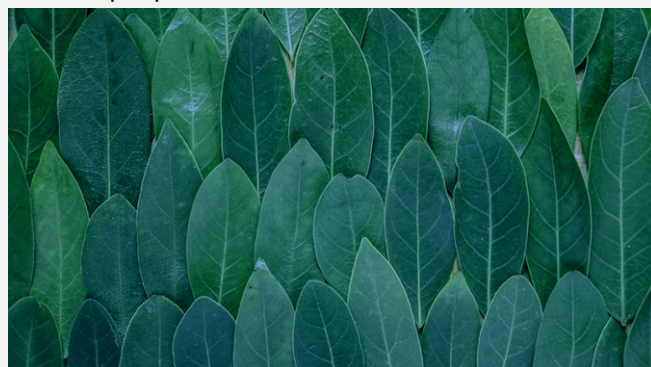


## Soil management

For specialists involved in agriculture, soil is a heterogeneous natural resource, with complex processes and vague mechanisms. Its temperature alone can give insights into the climate change effects on the regional yield. Machine learning algorithms study evaporation processes, soil moisture and temperature to understand the dynamics of ecosystems and the impingement in agriculture.

## Water Management

Water management in agriculture impacts hydrological, climatological, and agronomical balance. So far, the most developed ML-based applications are connected with estimation of daily, weekly, or monthly evapotranspiration allowing for a more effective use of irrigation systems and prediction of daily dew point temperature, which helps identify expected weather phenomena and estimate evapotranspiration and evaporation.

## Yield Prediction

Yield prediction is one of the most important and popular topics in precision agriculture as it defines yield mapping and estimation, matching of crop supply with demand, and crop management.

State-of the-art approaches have gone far beyond simple prediction based on the historical data, but incorporate computer vision technologies to provide data on the go and comprehensive multidimensional analysis of crops, weather, and economic conditions to make the most of the yield for farmers and population.

## Crop Quality

The accurate detection and classification of crop quality characteristics can increase product price and reduce waste. In comparison with the human experts, machines can make use of seemingly meaningless data and interconnections to reveal new qualities playing a role in the overall quality of the crops and to detect them.



## Disease Detection

Both in open-air and greenhouse conditions, the most widely used practice in pest and disease control is to uniformly spray pesticides over the cropping area. To be effective, this approach requires significant amounts of pesticides which results in a high financial and significant environmental cost. ML is used as a part of the general precision agriculture management, where aggro-chemicals input is targeted in terms of time, place and affected plants.

## Weed Detection

Apart from diseases, weeds are the most important threats to crop production. The biggest problem in weed fighting is that they are difficult to detect and discriminate from crops. Computer vision and ML algorithms can improve detection and discrimination of weeds at low cost and with no environmental issues and side effects. In future, these technologies will drive robots that will destroy weeds, minimizing the need for herbicides.

## Livestock Production

Similar to crop management, machine learning provides accurate prediction and estimation of farming parameters to optimize the economic efficiency of livestock production systems, such as cattle and eggs production. For example, weight predicting systems can estimate the future weights 150 days prior to the slaughter day, allowing farmers to modify diets and conditions respectively.

## Animal Welfare

In the present-day setting, livestock is increasingly treated not just as food containers, but as animals who can be unhappy and exhausted of their life at a farm. Animals behavior classifiers can connect their chewing signals to the need in diet changes and by their movement patterns, including standing, moving, feeding, and drinking, they can tell the amount of stress the animal is exposed to and predict its susceptibility to diseases, weight gain and production.



## Farmer's Little Helper

This is an application that can be called a bonus: imagine a farmer sitting late at night and trying to figure out the next steps in management of his crops. Whether he could sell more now to a local producer or head to a regional fair? He needs someone to talk through the various options to make a final decision. To help him, companies are now working on developing specialized chatbots that would be able to converse with farmers and provide them with valuable facts and analytics. Farmers' chatbots are expected to be even smarter than consumer-oriented Alexa and similar helpers, since they would be able not only to give figures, but analyze them and consult farmers on tough matters.

# European Union Vs Belarus: Humanity Vs Trade

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Before I begin to share my views about this topic I will explain the terms Europe and the EU because you will find these terms used quite often in the whole article. Europe is a continent whereas the EU is an integral part of Europe. Hence, I can say that the EU is the subset of Europe where different countries unite to form a union and they have the same currency and no borders at all. On the other side Belarus is a completely different country which is a part of Europe but not the part of the EU.

## What comes to our minds when we think of Europe?

Others think about Eiffel Tower of France, Bull fight of Spain, Luxury Life of Germany and also the beautiful Alps of Europe which are spread across Germany Austria and Switzerland.

But my insight offered me the tip on the social securities which are offered by the European Countries.

## What are these social securities?

Cited below are a few examples of the social securities:-

• Free education
• Pension after a certain age
• Work Life Balance
• No Border disputes

## But Why Europe? Why Poland?

There are many countries like the USA and Canada who offer a peaceful life to their Citizens. So, the question that arises is why do those choose Europe as their destination?

The answer is because Europe provides asylum to the Immigrants and after a certain probationary time period they are allowed to work.There are other EU countries but immigrants prefer Poland because it shares its borders with Belarus. Also Poland separates the rest of Europe from the European Union.

## But Why is Europe so friendly with Immigrants?

As per a report published in a German newspaper, Germany needs 3 lakh migrants every year if they want their economy to function well. To be more precise the old age population in Europe is more dependent upon the economy and as mentioned above Europe provides a good pension to their old age Citizens. So as to maintain this cycle they require the younger generation to work in order to pay taxes which will suffice for the pension of the old age citizens.

## Reason behind the sudden change in behaviour

We will study this with the help of an example. Back in 2014 the fifth biggest city of Germany was Cologne. When it was the night of new year, the city witnessed mass molestation done by the immigrants. Around one thousand German women were molested which led to the famed hostility against immigrants in whole Europe and it became strict with its policies for immigrants.

## But how did Russia, A soviet nation enter this continent?

To know this answer we need to be quite diplomatic and unprejudiced. And the reason is that Russia supplies artillery to the EU as well as Belarus. On the other side Belarus exports a large portion of its petroleum to Russia. Both EU and Belarus stand on synonyms grounds. Both the EU and Belarus do trade with Russia. Therefore it will be quite beguiling to see Russia pick a side.

**Russian Point of view**

Belarus has received strong support from its main ally; Russia, which has helped buttress Lukashenko's government with loans and political support.

Russian Foreign Minister Sergey Lavrov said that the upsurge in flow of immigrants resulted from the US-led wars in Iraq and Afghanistan and Western-backed Arab Spring uprisings in the Middle East and North Africa. He challenged the EU to offer financial assistance to Belarus to deal with the influx.

The Russian government is also Raising voice against the EU because it is not protecting the human rights of those migrants who are there without food or we can say with very minimal supplies when temperature falls to zero at night.

**Why Immigrants choose Belarus for Border crossing?**
Answer to this question is that Belarus invited them to their Capital city Minsk, and then dumped them across the borders of Poland which are covered with heavy forests. The temperature falls from -3 to -7 degrees at night. Immigrants were allegedly invited to Minsk and on social media we saw that some people advertised and commented that the roots to the EU are open via Belarus. In search of a better life, people from countries like Afghanistan, Syria, Congo, where the situation is already very terrible, landed in Belarus. Even smugglers started their border crossing using car, bus and Taxi but when the Polish government became strict, it became difficult for the migrants to cross the borders.

**Why did Belarus invite Migrants?**
The answer to this question is quite simple: it is the feeling of revenge from the European Union. This means that Belarus has declared hybrid war against the EU using Migrants as their weapon.
Since 1994 there is only one president of Belarus: Alexander Lukashenko. When elections were conducted in the year 2020 Alexander Lukashenko lost them. He declared them unfair and he was considered as the dictator of Europe.

Famously known as the last dictator of Europe. This caused protests in Belarus and those who did protest were either killed or were jailed. Almost all the political leaders of Belarus are either dead or in jail or they have fled the country.

This kind of behavior was not accepted by the EU and the United States so they put economic sanctions on the Belarussian Government. For example the top commodities (petroleum, potash) which were exported by the Belarusian Government were Banned from the EU. This completely isolated the economy of the Eu and it cost them 50% of the total export.
Belarussian Dictator also said that he will cut the gas supply line which connects Russia and EU via Belarus provided the EU not comply with their demands.

**Conclusion to a rift that caused innumerable deaths**
As far as humanity as a greater good is concerned, the Eu should open their borders for the Immigrants because it's not about revenge from Belarus, it is about the Humanity. Migrants are there in the jungle fighting with Polish Border police just to get a better life.

They themselves did not come to the borders of Poland, it was the propaganda which was fouly plotted by the Dictator of Belarus.

I ask the European Union to imagine themselves trying to survive on the borders of Poland in an intense cold and harsh weather, where the polish police are firing water cannons. Imagining living without any shelter in the bitter cold when temperature falls to zero whilst no supplies are provided for basic facilities is sordid for both the citizens and the EU.

Tarnishing the very essence of humanity, the EU and the Belarus Government is responsible for the deaths of approximately 11 people on their borders. What use is justice and law enforcement when Humanity is compromised at the cost of manned boundaries?

**I would love to die in my own country rather than dying on Polish Belarussian borders (North African survivor)**

## Editorial Section

At Chitkara University, the endeavour has always been to hone the skills of the learners. Keeping in line with this tradition, the Department of Computer Applications, Chitkara University, Punjab, has come up with an online magazine titled Wall for All.This e-magazine is proposed to provide a platform to the budding learners where they can share their knowledge and also the general information pertaining to the computing field. This e- magazine also provides an opportunity to the faculty members to share their ideas and views on topics of general interest. Wall-for-All is available for free download in PDF format from departmental website **ca.chitkara.edu.in.**

We hope to get due feedback from our readers which can help us in improving our further issues.

**HAPPY READING**

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