

COMPUTER ENGINEERING DEPARTMENT

VISION

"To become a department of national relevance in the field of Computer Engineering."

MISSION

The Department of Computer Engineering is committed to nurture students with sound engineering knowledge in the field of computer through the effective use of modern tools with a focus on global employability by imbuing leadership qualities, ethical attitude, lifelong learning and social sensitivity.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

Students of BE Programme in Computer Engineering will be able to:

PEO 1: Attain Sound Engineering knowledge and use of modern tools to solve real life problems (KNOWLEDGE)

PEO 2: Attain need based skills and life long learning to ensure global employability (SKILL)

PEO 3: Become successful professionals and responsible citizens with good leadership and strong ethical values (PROFESSIONALISM)

PROGRAMME OUTCOMES (POs)

PO 1: ENGINEERING KNOWLEDGE: Apply Knowledge of Mathematics, Science, engineering fundamentals and an engineering specialization to solve complex engineering problems.

PO 2: PROBLEM ANALYSIS: Identify, Formulate, Research Literature and Analyze Complex engineering problems reaching substantial conclusions using first principles of mathematics and engineering sciences.

PO 3: DESIGN / DEVELOPMENT OF SOLUTIONS: Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.

PO 4: CONDUCT INVESTIGATIONS OF COMPLEX PROBLEMS: Using research based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions

PO 5: MODERN TOOL USAGE: Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of limitations.

PO 6: THE ENGINEER AND SOCIETY: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.

PO 7: ENVIRONMENT AND SUSTAINABILITY: Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.

PO 8: ETHICS: Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practices.

PO 9: INDIVIDUAL AND TEAM WORK: Function effectively as an individual, and as a member of leader in diverse teams and in multi-disciplinary settings.

PO 10: COMMUNICATION: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

PO 11: LIFE-LONG LEARNING: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PO 12: PROJECT MANAGEMENT & FINANCE: Demonstrate knowledge and understanding of engineering and management and leaders in a team to manage projects and in multi-disciplinary environments.

PROGRAM SPECIFIC OUTCOMES (PSO)

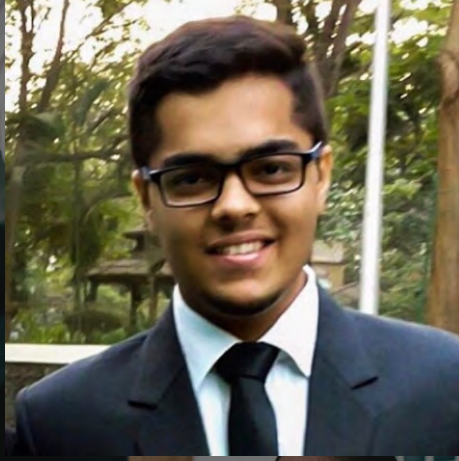
PSO 1: Develop academic aptitude and apply knowledge of computing and mathematics to computer science problems and thereby design and develop Software and Hardware Systems.

PSO 2: Enhance research skills and utilize advanced computing tools for analysis, design and implementation of computing systems for resolving real life / social problems.

PSO 3: Utilize multi-disciplinary knowledge required for satisfying industry / global requirements and hence develop an attitude for life long learning.

PSO 4: Have all round personality with skills like leadership, verbal and written communication, team work, sensitivity towards society in order to become valued and responsible professionals.

WAVE TEAM



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M E S S A G E S



DEAN'S MESSAGE



With the field of technology expanding to newer horizons, it has stepped in to take a critical role in influencing our lives. The youth, which has always been the torchbearers of progress and innovation in our society, have imbibed this culture in their lives. In the light of this synergy of youth and technology, this edition of Nimbus focuses on the effects of emerging trends in technology on youth.

Nimbus has always been more than a technological platform for TCET's COMP department; it is a vessel of inspiration. The magazine is a haven for all young minds to gain knowledge and for them to showcase their technical writing skills. It is a platform for them to hone their skills and take inspiration for the future.

I would like to congratulate the students and faculty members of the publication team for their unwavering dedication and hard work put in to publish this edition of Nimbus.

I wish everyone good fortune and all the success in their future endeavors.

Dr. R. R. Sedamkar
Dean-Academics



HOD'S MESSAGE

NIMBUS is not just a magazine, but it is the embodiment of perfect harmony between technical acumen and creativity. It is the vessel which brings students to the new challenges of professionalism. As the department magazine, it is the perfect stage for students and staff to reflect their ideas and research into inspiration and knowledge for the readers.

This 8.2 Edition of NIMBUS highlights the theme 'The effect of emerging technologies on future generations'. With the technology curve going in a steep incline, it is important we monitor the recent trends like artificial intelligence and social media and the positive and negative impact they may have on the future. We hope that the readers grasp all that we wish to convey through this issue, acknowledging the hard work put in by the stakeholders of the department.

Lastly, we would like to congratulate and thank the committee and the students, faculty, industry experts for their exemplary contribution, their valuable time and effort.

Dr. Sheetal Rathi
HOD-COMP

FACULTY INCHARGE'S MESSAGE



The most important aspect of technological ideas is its distribution on the highest platforms. It is a great pleasure to present one such platform, NIMBUS. NIMBUS is currently in its ninth edition and this edition focuses on the theme, “Effect of Emerging Technologies on Future Generations”.

Technology and its advancements have begun to have adverse impacts on our lives. It is the duty of all those who live in the present to think about how this integral part of our lives will affect the future. NIMBUS’ current edition highlights some of these effects, both constructive and harmful, and the impact they have on the future generations to come.

I would like to give my felicitations and commendations to the editorial team, the writers and all stakeholders involved to help us embark on this great endeavor for the ninth time.

Mrs. Vidyadhari Singh
Faculty In-charge



FROM THE EDITOR'S DESK

At the very beginning we would like to extend our earnest gratitude to our Principal Dr. B K Mishra, our Dean-Academics Dr. R R Sedamkar, our Vice-Principal Dr. Deven Shah and our Head of Department Dr. Sheetal Rathi for their inspiration and ceaseless motivation towards the working of this issue of Nimbus.

In this pursuit of knowledge, we have covered many aspects of the field of computer science which have proven to be helpful to our readers to understand new concepts and think in a new direction with positive intent altogether.

Intending to raise awareness about the future of humans and technology, in this issue, we have concentrated on technological advancements that will affect the future generation. The positive, as well as the negative point of view, have been taken into consideration and discussed to provide the reader with both the perspectives.

On a closing note we would give special thanks to our faculty in-charge of this issue Mrs. Vidyadhari Singh for her constant support and motivation and also our team of editors and designers for their motivated and enthusiastic attitude to their work and in making sure, that Nimbus maintains its standard it has set through the previous issues, by bringing in phenomenal content. Without them, this issue would have remained what we dreamt it to be.

Mr. Adit Rathi
Head of Art-Design

Ms. Athashree Vartak
Chief Editor



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STUDENT ARTICLES



AI AND FUTURE OF HUMANS

Technology is playing a vital role in every page of our lives. For current generation, a life without technology is highly impossible. There are various aspects and branches of technology that deal with humans in day-to-day life. Machine learning is one of the major scopes in today's world. It is a subset of Artificial Intelligence and a field that gives computer an ability to learn on their own, without being explicitly programmed. AI is basically creating human like machines that can work equally or even more than a human can work.

As the word itself gives us the raw idea about AI which is Artificial intelligence which means whatever the intelligence used will be artificial and not real. So the question arises what is the need for it and the answer is to make the world smarter. With the applications of AI, we can eliminate the global poverty by identifying the major reason behind this devastation. It will help in impacting education levels in poorer areas as lack of education and poverty is linked with each other. We can see intelligent chatbots being able to stand and teach the students without access to a computer or any internet connections by using real-time analytics and machine learning. Apart from these, it will create more opportunities and various fields in which researchers can do their research and excel in their interest of fields. One of the major intelligence used by today's generation is the example of wireless networks (internet). It is benefiting and destroying people at the same time. The work done with the help of AI will be automatic and no other human are going to involve with the automation process. One of the examples that are popular in automation is sensors. The way they detect something automatically and provide the result simultaneously is helping us in reducing the testing time and labour work.

With so many advantages comes a game changing factor and that is the negative side of AI. We are so busy in focussing the future of AI that we forgot to mention that using machines instead of humans will never going to replace the brain of humans with the work done by machines. We can make the machine learn everything and can make it work x1000 better and efficient as that of human but when it comes to ethics and values, no one can taught them how to and when to use the morals so that we can balance our lives in a better way. Because "Values are caught, not taught". When it comes to technology, there is no place of ethics. When it comes to biasing, when people say that this AI model is biased, it basically means that the model is performing poorly. Reason behind the biasing is caused

by various bias in algorithms used to create the model. There are four major types of biasing. First is Sample bias that occurs when data is used to train the model and it does not represent the actual model in that specific environment. Second is Prejudice bias, it occurs when cultural stereotypes come into existence. Third is Measurement bias, it occurs when systematic value distortion takes place and it can be avoided by comparing and measuring multiple trained devices. And lastly the fourth bias is Algorithm bias; it has nothing to do with the data. But it occurs when an error is occurring repeatedly in a system and creates unfair outcomes. Data Scientists that understands all the types of biasing are likely to present better models and better training data. Data scientists need to be aware of these biases and know how to avoid it using different methods and approach by continuously testing the model. With these many biasing, there comes the security demand which researchers have to fulfil and if they lack in it, the effect is going to disturb human's privacy and will lead to various threats such as data manipulation, losing the data completely and misusing it on the behalf of any other person. So protecting data will become a major security issue in which researchers of AI has to work on. Another major drawback is the decline in thinking ability of humans as every work will be happening automatically so there will be no space where human can think and work which will lead to poor imagination of a person. Human will become useless as they are going to use machines for their every kind of work. The life with AI is going to be extremely digitalized.

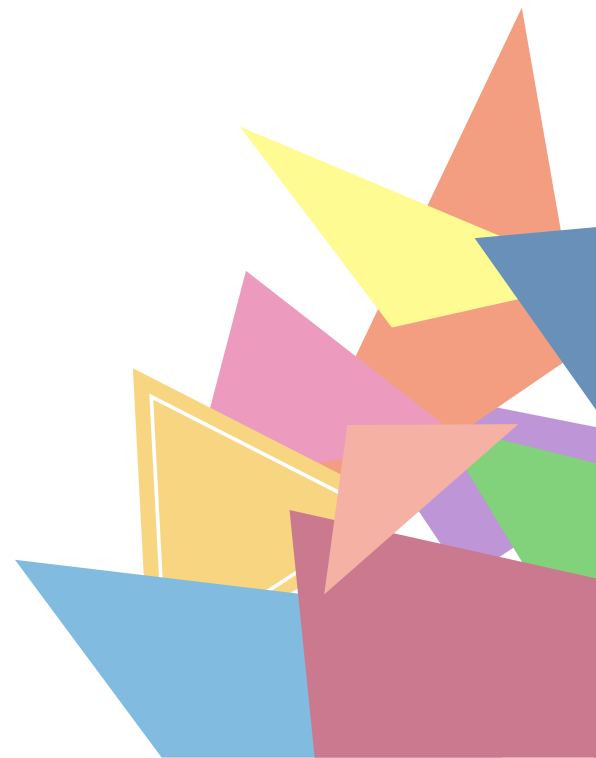
Now talking about challenges and competitions that the future generation will be facing because of advancing AI, College diplomas will no longer guarantee employment, obtaining a Masters or PhD will become a pre-requisite for human to enter the business world. With the creation of more intelligent automation, lower level jobs are being performed by humans less than they were before. With typical entry-level jobs decreasing and the number of people entering the workforce increasing, the competition for jobs will be cutthroat. But Report titled "Reworking the Revolution" estimates that new applications of AI combined with human collaboration could boost employment worldwide as much as 10 percent by 2020.

Analysts expect that people will become even more dependent on networked artificial intelligence (AI) in complex digital systems. Some say we will continue on the historic arc of augmenting our lives with mostly positive results as we widely implement these networked tools. Some say our increasing dependence on these AI and related systems is likely to lead to widespread difficulties. Responses of experts on this report, 63% who said most people will be better off, 37% who said most people will not

be better off. These are all statistics and experts assumption but nobody knows what the future holds. So, what do you think that advancing AI and related technology systems will enhance human capacities and empower them? That is, most of the time, will most people be better off than they are today? Or is it most likely that advancing AI and related technology systems will lessen human autonomy and agency to such an extent that most people will not be better off than the way things are today?

Srishti Singh
Anish More

TE-CMPN-B



CYBERWARFARE: THE RISING THREAT TO MANKIND

Everyone in this world is talking about emerging technologies and their effects. Just like the coin with two sides, similarly advancing technology has its own two sides. One with its advantages, which the human race is enjoying and striving hard for the advancement of. And the second is the dark evil side effects of the emerging technology which most of the people are unaware of. During World War I, new weapons, such as airplanes, poison gas, machine guns, submarines, and armored tanks, changed the war forever. Millions of victims were produced in just four years, and it took decades to recover from the bloodshed. Soon after World War I, a second one came and made Europe uncomfortable due to atomic bombs and V-2 missiles.

If that were the case, how would world war take place today? The answer will be cyber-warfare, and this may be the scariest method the world has ever experienced. You can expect superpowers to manipulate the most important 21st-century technology ever known to man: the Internet.

Although the immediacy of the war has diminished, war is far from inevitable. This will be the era of cyber war and the consequences will be incomprehensible. It's more than just corporate intrusion and leakage of letters. Cyber war can lead to pipeline explosions, nuclear reactor failures, power failures and weapon system sabotage. Each of them can cause a significant number of deaths.

Cyberwarfare is a computer or network conflict related to the politically motivated attacks of a nation state against another nation state. In these types of attacks, the subjects of a nation state try to disrupt the activities of organizations or nation states, especially for strategic or military purposes and cyber espionage.

Cyber wars generally refer to cyber attacks committed by one country by another country, but can also describe attacks by terrorist groups or hacker groups aimed at achieving individual country goals. The ultimate attribution of cyber attacks to the state can be difficult if these attacks are performed by entities with advanced persistent threats (APT), but such attacks are often specific Associated with the country. There are many examples of suspected cyber attacks in recent history, but there is no formal agreed definition of a cyber "war act" that experts believe is a cyber attack that leads to a direct loss of life.

The scale of today's cyber war means that arms races are ongoing. As new types of attacks appear, new countermeasures are being

developed that should be avoided.

The earliest case of state cyber warfare was the Stuxnet worm, which was used to attack Iran's nuclear program in 2010. Malicious software attacked SCADA systems (supervisory control and data collection) and spread to infected USB devices; although both the United States and Israel were involved in the development of Stuxnet, no country has officially recognized their role.

However, there are three important technologies that can accelerate the development of the cyber war over the next decade.

Machine learning and artificial intelligence

Artificial intelligence has already been implemented in various situations, and the government may have already included it in cyber weapons.

Cloud

Cloud storage is both a risk and resource when it comes to cyberwar. On the other hand, distributed storage can easily steal important information. This is due to the fact that an attacker needs to identify only one sensitive machine to compromise the system.

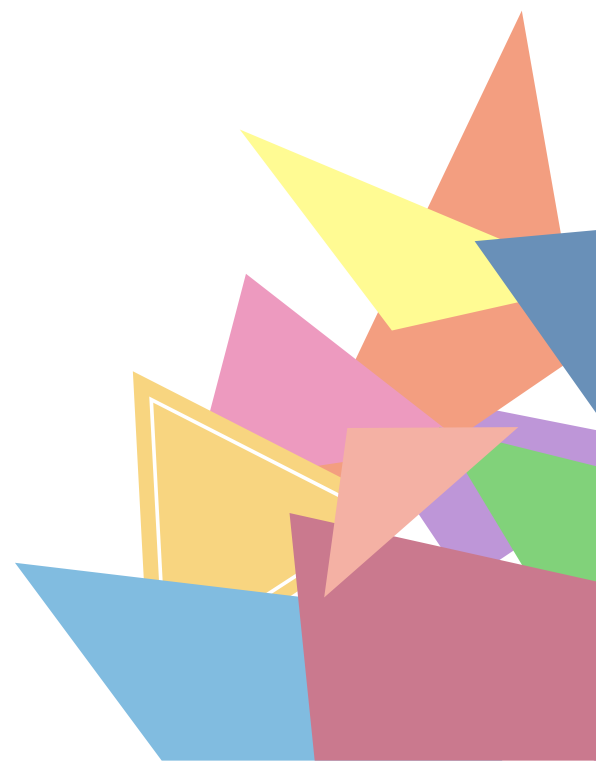
Few measures that Enterprises should take to combat cyberwarfare

- Invest in multiple security tools.
- create layered defense.
- conduct risk assessment on regular basis.

As new technologies emerge faster than in the past, there is no denying the unique threat that cyber warfare will continue to block message headlines for the foreseeable future. That's why it's important to consider defense mechanisms that help identify and mitigate these threats before they weaken the data and affect a large number of people in a more general way.

Effective security measures to combat this malicious threat will be the first line of defense for large companies. In addition, private organizations can share information about inefficient and effective data protection technologies in public sector companies (and vice versa) to ensure that everyone can respond better.

Devang Dubey
SE CMPNA 24



Analysing the Biggest Asset: Data

Experts in the field suggest DATA to be the biggest asset of the ever so hungry data-consuming world. More the DATA we consume the more valuable it gets. Tech giants have been collecting and analysing the data for over a decade now maybe to show you personalised content according to your previous use case scenario and to show you better content in the field you like and optimize your searches. Its time to take data seriously and analyse it for greater good.

So, What Exactly is Data Analysis?

Data Analysis refers to Analysing, Modelling, Organizing and maintaining the data in a proper symmetrical way that can be utilized in future for reference. It deals with the statics, Maths and proper segmentation of the data to get a better outcome and predict the stats. It is used for predicting and analysing the data for testing the theories and getting a result that can improve the usage. Predictive (detect pattern and trends by considering what occurred in the past to predict what will happen in the future) analysis is the application of statistical or structural models for predictive analysis for the analysis purpose.

Use of Data Analysis for Education Purpose

Data Analysis can be utilized in a variety of situations in the Education field mainly in accessing student performance and analysing college/university performance metrics. And rank them according to various criteria that can help in better selection.

We can broadly classify it into 2 parts:

A] College/School: We can use data analysis in college for various applications-

- Effectively measure student performance according to his previous record (data) and help them improve it to craft a better curriculum that can be beneficial to both teachers and students in tracking their need and adapting accordingly.
- Help teachers adapt better teaching techniques according to the student's performance and analyse their results on a regular basis and help them in knowing their strong point.
- Keep a track of the result of students and monitor the attendance of the Student and the Staff and analyse it for

their improvement and progress.

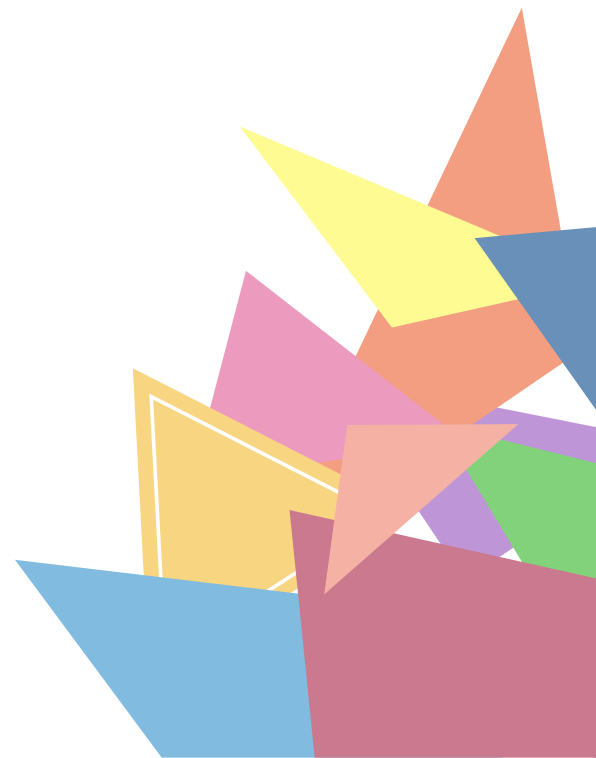
- Institution-wide data analysis will provide a wider view of how resources and methods are affecting learning and help in making better policies and decisions.

B] Student:

- Data Analysis will help a student in mapping their performance metrics and manage their performance over a period of time to get better results and achieve a better level of understanding about their curriculum and strength.
- It can help them to analyse their strength and weakness to achieve a better result from the data and help them to improve it.
- A smart curriculum can be built with data analytics that can modify and adapt to the scholastic requirement of every student.

Data Analysis can help and improve a variety of operations in the Educational field and help University/Institution in creating better curriculum from the analysed result and help students track down their performance using this technology. It can be used to create a universal parameter of the various educational standard that can be used to increase the quality of education across the globe and map growth of the various educational platform. The data-driven decision will be a crucial part of this system using Educational Data Analysis.

-Sarvesh Khandelwal
TE CMPNA 53



Effect of Games on young generations

“Yes, kids love technology but they also love Legos, scented markers, handstands, books and mud puddles. It’s all about balance.”
-Anonymous

Before providing children a particular game, there are three important parameters on which they should be allowed to play. The first one is duration; what proportion of time children are playing a particular game is to be known efficiently. The second one is age. Between 6-14 years, children are required to play outside the home and not staying at home sitting in one particular position spending their time the screen. The third one being content. It is very important for parents to take care of which category of game their children are playing.

According to a Tech Talk, 50% of children use screen when they should probably sleep which adds unnecessary fatigue in their schedule. When they play on their respective phones, they sit still till the game ends which leads to obesity, anxiety which further leads to depression; their brain starts to over-simulating due to which many mental illnesses start to take place. Migraines is one of the effects which occurs due to intense concentration or eye strain. This will create a huge impact on their academic performance, since they rely completely on mobile and by getting more addicted to it, they lose their interests in studies which indirectly leads to their bad future. While they are busy in exploring games, they forget to explore themselves which creates a barrier between them and their social life. They do not interact with more people as they are busy in creating their gaming skills due to which they lack their social skills.

Apart from talking about the effects of games, the major reason behind children focusing more on games is less attention of their parents towards them. Many years ago, there was this ritual that one parent will earn for the family and another will take care of home and children. Nowadays, both the parents are working which is good for the family betterment but then at the same time, they should be that

much attentive and caring towards their child too. Sometimes it is to be seen that when the child starts to cry, the parent hand over him/her mobile phones so that they get distracted for some time and the parent can further complete his/her work which is reason why the children are living more virtual life than the real life.

According to an estimation made by gaming production company, it is found that between 1995-2008 there is a huge production of games, apparently violent games such as online blue whale game challenge, PUBG, etc. started producing post 2010 and according to the estimation, the death rate has been increased since then. It is rightly said that you can perform a task in a particular period of time but the effect of that task will remain forever. Similarly, suppose you are playing a game for 30 minutes and then you proceed towards the next task, but in the very back of your mind, the display of that game will still be running, which leads to less focus on the current task and at the same time, if you have played some violent game, which includes violence, suicide, assassination, etc., the effect of such will last longer. The person will be in a virtual world where he will think that the game is still going on.

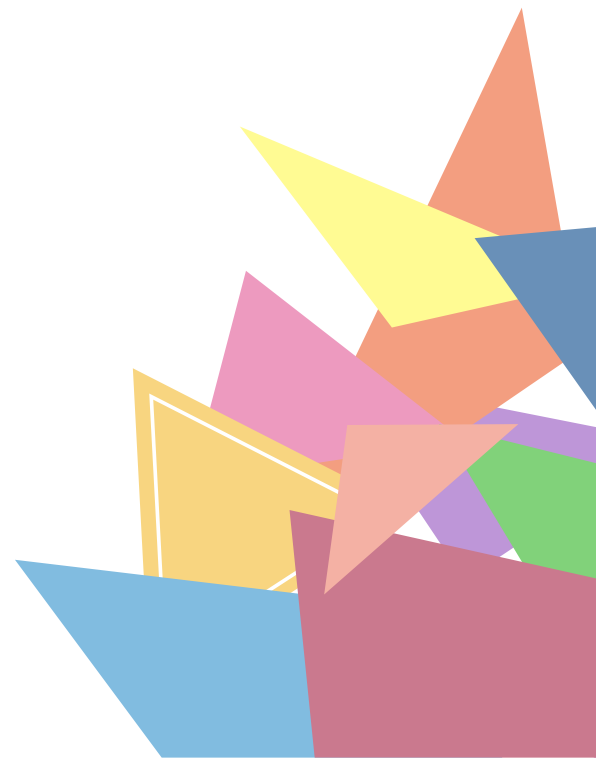
Though every coin has two sides, and thus every technology produced has its own advantages and disadvantages as well. It is up to us how we take it. Games were made for the sake of entertainment of children so that after their hectic schedule in schools or colleges, they can divert their mind and do not get bore by sticking to a particular schedule, but it is us mistaken the purpose which is now leading to the worse condition.

Game is one of the areas where humans have excelled in. Similarly, there are a lot of other technologies produced for the benefit of humans but it is us who has mistaken it and misused it in some or the other manner. When any technology is being created, there is one common motive behind it, which is to be undertaken and that is saving the time, as we all know, there is shortage of time and loads of work to complete in that particular time. We want our work to be done in less amount of time. Thus, Technology is created for saving our time. For eg, we have moved from cycle to motor-cycle, from motor-cycle to car and from car to buses and trains and from trains to aero planes and jets which indirectly saves a person's time in reaching from source to destination. The motive

was to save our time by making our time productive and not waste our time but it has become a productive way of wasting time. Now the question arises who is to be blamed, the person who demands technology or the technology itself.

“Blaming violent games for horrible events is much like putting the blame on food for the cause of obesity.” - Jamee Gee.

**-Srishti Singh
TE CMPN-B**



Effect of internet and upcoming technologies

“Technology” what does technology mean to us? Why do we need it?

If we tend to undergo the definition then Emerging Technology means new technologies that are currently developing or are going to be developed over the consequent five to ten years, and which will substantially alter the business and social environment. These include information technology, wireless data communication, man-machine communication, on-demand printing, bio-technologies, AI, and advanced robotics.

In today's world no one can live without their phones, television and most importantly without internet. Technology has not only contributed in everyone's personal life but also through various fields like medicals, education, agricultural etc. Nowadays there are many advance machines which are a blessing to the world due to which a person can easily detect what kind of disease it is. There are smart boards and animated videos the help in clearing a student's concept. There are many advance techs which helps in surviving in this techno-savvy world a person would find difficult to live he is unable to cop up with emerging technology. So, we could say that emerging technology is for the betterment of the humankind. Do technology has only positive effects? The answer is No. Just like the two sides of the coin, technology also has some negative effects though.

Technology can make the world an easier, more comfortable place to live in for future generations. The home and outdoor environments will undergo startling changes, making them more convenient to live in. Typical homes will cater to the personalized needs of each occupant. Homes that can sense when the owner arrives and turns on the lights, opens the doors and caters to the needs of the owner will provide an unparalleled sense of comfort. The homes will things such as the owner's body temperature and light sensitivity, and adjust these factors to suit in owner's requirements in each room. Transportation will also change to a greater extent. Even though the flying car may just be a fantasy, in the near future, cars can be given microchips that assist the driver. Cars will be able to detect weather and road conditions and use this data to provide a safer journey. Cars will be able to detect on-going traffic congestion and recommend alternate routes to avoid this. They will even be able to test a driver's breath for the

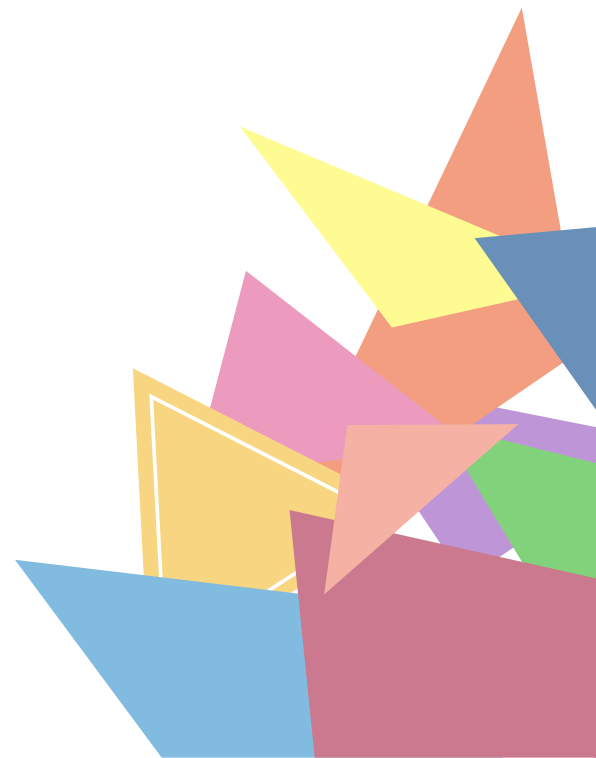
presence of alcohol and shut the car down if alcohol is detected. This will result in a reduction in road fatalities. Using Artificial Intelligence, a complete auto-pilot feature may be possible. Airplanes will become even faster, making distant places simply accessible. These developments will provide a greater level of security and potency in transportation.

Technology will have a greater influence on the education system in the future. Computers will be integrated into every classroom to facilitate learning. Computers are an effective tool in teaching and they will assist teachers in schools. Technology will also make education accessible to almost anyone who desires it. Distance learning and tutoring over the Internet will become easier and more popular, and one day, will reach a stage where the classroom is no longer necessary. Also, tutorials on CD or DVD will become more popular since they allow students to work at their own pace, and to work when it is convenient to them.

There are various more fields where technology will get affected but do these there are some adverse effects also like. Now due to this emerging technology humans are trying to gain maximum work without troubling their bodies like previously women used to wash clothes with their hands as a result they were able to do their body exercise but now they are replaced by washing machines previously a person used to walk for shorter distances but now they have become lazy they are not even ready to walk 10 steps also.

Hence by the end of this article I would like to conclude that Emerging technology is definitely required in today's world but at the same time we should take it into notice that we should not over-rely on technology and depend on each and everything for it and should use technology as a blessing and not as a disguise.

-Saurabh Pal
TE CMPN-B



IMPACT OF SOCIAL MEDIA ON YOUNG ADULTS

In 2015, American adolescents aged thirteen to eighteen years reported using social media one hour and eleven minutes every day, seven days every week. Social media are used for a range of activities, as well as sharing info, interacting with peers, and developing a coherent identity. During this review of the analysis, we have a tendency to examine how social media are intertwined with adolescent development and assess each the pros and cons of adolescent social media use. We have a tendency to embody suggestions for more analysis and suggestions for clinicians, policy manufacturers, and educators. The expansion in interactive media platforms and their speedy adoption by youths is one indication of the compelling nature of social media tools, like Instagram and Snapchat.

Social media tools are now readily accessible on the net, and within the last many years, they need become even easier to access via applications (apps) on smartphones. On average, youths receive their initial mobile device around the time several begin the transition into adolescence. Well-understood psychological mechanisms, like social comparison (ie, comparison of oneself to others in either an upward or downward direction: that is, with people who are seen as higher or worse than oneself, respectively), self-disclosure (sharing info concerning the self with others), and impression management (acting to spotlight positive aspects of the self and minimize characteristics that are perceived as unattractive) are known in studies of social media and are related to adolescents' behavior, each completely and negatively.

By and large, existing analysis has found that youth use social media within the service of important adolescent biological process tasks, like identity development, aspirational development, and peer engagement. As adolescents look for intimacy with their peers and attempt for autonomy, their on-line environments often replicate their off-line lives. In distinction to early on-line applications that were seen as refuges from reality today's on-line environments replicate, complement, and reinforce off-line relationships, practices, and processes.

The literature on social media and adolescents, moreover as a lot of in-depth studies of rising adults, reveals associations

between time spent exploitation social media and hyperbolic shallowness, hyperbolic social capital (resources accessed through one's social relationships), safe identity exploration, social support, and a lot of chance for self-disclosure. These processes area unit all important to healthy growth and identity development.

A consistent finding is that adolescents use social media to develop and maintain friendships.¹ Nearly common fraction of teenagers report that they create new friends through social media, and >90% use social media to attach with existing off-line friends on a daily basis. Adolescents conjointly report that these media facilitate them perceive their friends' feelings and feel a lot of connected to them. throughout a biological process stage once peer support and approval is important, social media support these desires.

Identity exploration, or the explore for a coherent sense of self, takes place on-line moreover as offline. Adolescents use social media for self-presentation through the ways in which they like better to represent themselves on-line by posting photos and sharing aspects of their lives. additionally, youth use social media for impression management by making an attempt to use these media to manage alternative people's perceptions of WHO they're and the way they act

The use of social media throughout adolescence can even negatively impact health and development. though the bulk of adolescents report that social media area unit a positive contribution to their lives, a lot of negative associations with social media have conjointly been documented within the analysis literature. These embody cyberbullying, depression, social anxiety, and exposure to developmentally inappropriate content.

Cyberbullying has received an excellent deal of attention in each the favored press and educational analysis. The church bench centre report noted that one in four adolescents report digital "drama," a word that adolescents appear to relate to quite the term "cyberbullying."¹Research found that on-line bullying, usually displayed through social media, is related to a lot of depressive symptoms than ancient bullying. One reason for this could be the general public and enduring nature of on-line posts. A recent study found that risky on-line self-presentation hyperbolic the chance of receiving negative on-line feedback on social media.

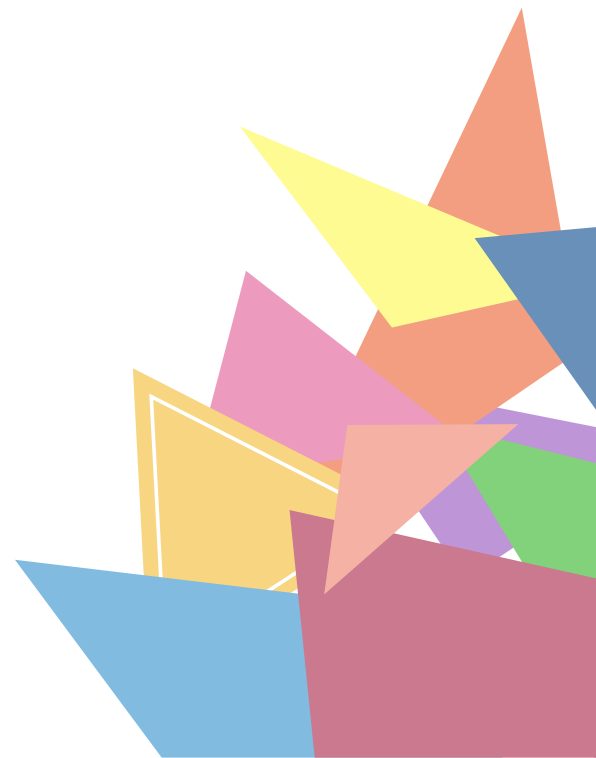
Because teenagers have nearly unlimited access to peers through mobile technologies, social media use could end in dynamic sleep cycles for adolescents, which can contribute to depression. Teenagers WHO report having mobile devices in their bedrooms and departure them on in the dead of night sleep but people who flip them off. Lack of sleep is expounded to depressive symptoms, loss of memory, issues at college, automobile crashes, and

alternative serious problems.

Research on ancient media like tv and magazines has known problematic implications for adolescents (especially feminine adolescents) around problems like shallowness, gender stereotypes, self-objectification, and not possible body standards. Similarly, a longitudinal study found that frequency of social media use vie a task within the relationship between mass media associate degreed an objectified self-concept (eg, decision making oneself on the idea of however one is perceived by others). Given the interactive nature of social media, these relations is also enlarged as a result of peers amplify social media content, providing extra social validation. One study found that fifty four of eighteen year old's public social media profiles contained or a lot of references to a insecure behavior, like sexual issues, drug abuse, or violence. Exposure to inappropriate content and also the ability to show and consequently receive endorsement through peer validation of risky behaviors (such as drinking alcohol) could luresome adolescents to form poor selections concerning what to share on social media.

Finally, it's vital to recollect that the majority social media platforms area unit owned by for-profit firms, which regularly advertise, collect info, and sell information. This direct channel to adolescents, outside the eyes and ears of adults, suggests that industrial interests will take precedence over prosocial and developmentally applicable interests. Advertisers for sexual content, alcohol, and lots of alternative unhealthy merchandise can even simply reach youngsters and adolescents through these new media.

-Siddharth Tiwari
BE/CMPN-B



History and Future of Machine Learning

The name machine learning was coined in 1959 by Arthur Samuel. Tom M. Mitchell provided more formal definition of the algorithms studied within the machine learning field: "A computer program is said to learn from experience E with respect to some class of tasks T and performance measure P if its performance at tasks in T , as measured by P , improves with experience E ." This definition of the tasks within which machine learning is concerned offers a fundamentally operational definition rather than processing it in psychologically featured terms. This follows Alan Turing's proposal in his paper "Computing Machinery and Intelligence", in which the question "Can machines think?" is replaced with the question "Can machines do what we can do?"

Machine learning is an application of computing Artificial Intelligence (AI) that has systems the power to mechanically learn and improve from expertise while not being expressly programmed. Machine learning focuses on the development of computer programs that will access knowledge and use it learn for themselves. Machine learning is closely connected to computational statistics that focuses on creating predictions using computers. The study of mathematical optimization delivers ways, theory and application domains to the spherical field of machine learning. Data mining is a field of study inside machine learning, and focuses on data analysis through unsupervised learning. In its application across business issues, machine learning is additionally cited as predictive analytics.

In Financial Services, Banks and alternative businesses within the financial industry use machine learning technology for 2 key purposes: to spot vital insights in data, and prevent fraud. The insights will establish investment opportunities, or facilitate investors understand when to trade. Data mining can also identify clients with high-risk profiles, or use cyber security to point warning signs of fraud.

In Government agencies, like public safety and utilities have a selected need for machine learning since they have multiple sources of data that can be mined for insights. Analyzing sensor data, as an example, identifies ways to extend potency and save money. Machine learning can also help to minimize identity theft.

In Transportation, analyzing data to identify patterns and trends is important in the transportation industry that depends on creating routes a lot of economical and predicting potential issues to extend profitableness. The data analysis and modelling aspects of machine learning are vital tools to delivery companies, public transportation and other transportation organizations.

Popular Machine Learning Methods:

How do machines learn? Two Machine Learning techniques are supervised learning and unsupervised learning. Approximately 70% of Machine Learning is supervised learning, whereas unsupervised learning ranges from 10-20%. Other methods that are used less which includes semi-supervised and reinforcement learning.

Supervised Learning:

The supervised learning algorithmic program receives a collection of inputs alongside the corresponding output to search out errors. Based on these inputs, it would modify the model consequently. This is a often a style of pattern recognition since supervised learning uses ways like classification, regression, prediction, and gradient boosting. Supervised learning then uses these patterns to predict the values of the label on alternative unlabelled data.

Supervised learning is often employed in applications with which historical data predicts future events, such as fraudulent credit card transactions.

Unsupervised Learning:

Unlike supervised learning, unsupervised learning works with data sets without historical data. An unsupervised learning algorithm explores collected data to find out a structure. This works best for transactional data; for example, it helps to establish client segments and clusters with specific attributes, usually used in content personalization. Popular techniques where unsupervised learning is employed additionally embody online recommendations, identification of data outliers, and segment text topics are examples of unsupervised learning.

Semi-Supervised Learning:

As the name suggests, semi-supervised learning is a bit of each supervised and unsupervised learning and it uses both labelled and unlabelled data for training. In a typical scenario, the algorithm uses a little amount of labelled data with a large amount of unlabelled data.

Reinforcement Learning:

Like traditional types of data analysis, here, the algorithmic program discovers knowledge through a method of trial and error and so decides what action results in bigger rewards. Three major components form up reinforcement learning: The agent, the environment and the actions. The agent is the learner or decision-maker, the environment includes everything that the agent interacts with, and the actions are what the agent does.

Whether you realize it or not, Machine Learning is one amongst the foremost vital technology trends which underlies so many things we use. Speech recognition, Amazon and Netflix recommendations, fraud detection, and financial trading are a few examples of Machine Learning remarkably in use in today's data-driven world. Due to more and more use of it, the consequences will affect the same for the future generations.

-Vishal Singh
TE-CMPN-B



IMPACT OF MOBILE PHONES ON KIDS

We live in a world of technology where children understand things better than adults do. Parents may feel pressured by their children to provide them with a cell phone at an early age, but aren't sure when children are actually ready for this responsibility.

Many parents will begin to think about providing their child with a mobile phone during the middle school or latest by high school years, when kids are more likely to be involved in after school activities and more likely to be home alone. According to a Nielsen report released in February 2017, approximately 45 percent of children between the ages of 10-13 had their own smartphone with a service plan. Also, it would be better to point out that the phones have evolved from being a heavy 1 inch hard hitting buttoned device to a sleek 100 gm touch screen novelty.

Its benefits can be given as:

- The ability to communicate in emergency situations. Many families don't have home phones and public pay phones are a thing of the past.
- Opportunities for social contact with peers – texting, use of social media and (less likely) actually talking on the phone.
- Ability to gain immediate knowledge for personal or academic use – even in elementary school it's hard to do school work without electronic access to apps, web research and Google docs.
- Entertainment – Netflix and chill, prime video are on everyone's subscription list now-a-days providing world class entertainment at a touch of the button.

Like a coin has two sides, so does any issue at hand. Thus, its cons can be discussed as:

But are the children responsible enough to carry a cell phone especially their own cellphone? If they often can't find their shoes or easily forget where they left their lunchbox, should they really be provided with an expensive phone?

Also, is the impact on health taken into consideration? The American Academy of Pediatrics (AAP) released information about exposure to radiation from cell phone usage. Risks of media in general include obesity (due to sedentary screen time), decreased sleep and distractibility contributing to poorer academic performance (because YouTube is more interesting than math).

What can go wrong socially? Thinking about your child's maturity level and ability to recognize social cues is important.

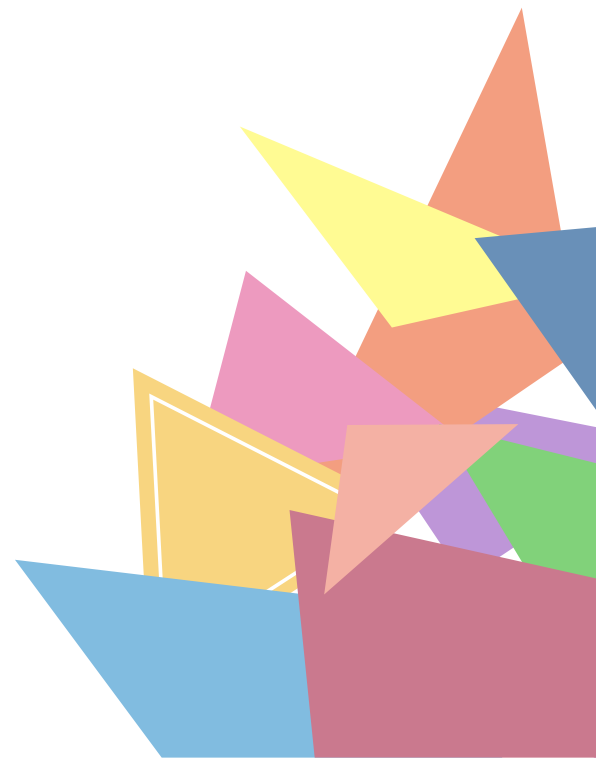
- Do they understand that repeatedly texting a friend with no response from the friend could be considered annoying?
- Do they know about misuse of private information through social media, that anything they post on social media accounts can be used against them in the future (see many examples from athletes, politicians and celebrities who thought their past was behind them)?
- Research has suggested that children in the third through fifth grade who owned a cell phone were particularly vulnerable to cyberbullying and that they had been cyberbullies themselves.
- According to the AAP it is estimated that 12 percent of 10-19 year old youth have sent a lewd photo to someone else.

In general, setting a decent set of guidelines and limits up front is their (and parent's) best opportunity for success. These guidelines may include:

- Limit the amount of time spent on the phone.
- Experts suggest no screens for at least one hour before bedtime, so consider having your child turn in their phone in the evening. Remove your child's phone from their room at night so the temptation of a late night "hello" or, worse, with friends, is not there.
- Consider "device free" meals or family times during the day (yes, that means you too, parents!) to promote communication and relationship building.
- Consider using parental controls on the phone and apps.
- Be your child's social media friend to keep tabs on what they are posting.
- Educate yourself on the latest apps.
- Be honest and let them know you will be holding them accountable from the beginning so that there are no surprises.

- Communicate openly with your child about the risks of excessive cell phone and internet usage.
- Help them understand safe websites, recognize cyberbullying and the risks of chat rooms and communication with "friends" you've never met before.
- Promote open communication and questions by actively listening, withholding judgment and corrections and allowing them autonomy to problem solve when appropriate.

Mukul Suvarna
TE-CMPN/B



The Future of computer science within work

Smart technologies aren't simply ever-changing our homes; they border their manner into the various industries and are boosting the work. AI has the potential to boost productivity, potency and accuracy across a company – however is that this entirely beneficial? Several concerns that the increase of AI can result in machines and robots and replacement of human employees and think about this progression in technology as threat instead of a tool to improve ourselves.

A positive future with computer science:

Many businesses and people are optimistic that this AI-driven shift within the work can lead to additional jobs being created than lost. As we have a tendency to develop innovative technologies, AI can have a positive impact on our economy by making jobs that need the talent set to implement new systems. 80% of respondents within the EY survey say it absolutely was the shortage of those skills that was the most important challenge once using AI programs.

It is seemingly that AI can long replace jobs involving repetitive or basic problem-solving tasks, and even transcend current human capability. AI systems are creating selections rather than humans in industrial settings, client service roles and at intervals money establishments. Machine-controlled decisioning is liable for tasks like approving loans, deciding whether or not a client ought to be onboard or characteristic corruption and money crime.

Organizations can take pleasure in a rise in productivity as a results of larger automation, that means additional revenue can generated. This therefore provides further cash to pay on supporting jobs within the services sector.

Now talking about challenges and competitions that the future generation will be facing because of advancing AI, College diplomas will no longer guarantee employment, obtaining a Masters or PhD will become a pre-requisite for human to enter the business world. With the creation of more intelligent automation, lower level jobs are being performed by humans less than they were before. With typical entry-level jobs decreasing and the number of people entering the workforce increasing, the competition for jobs will be cutthroat. But Report titled "Reworking the Revolution" estimates that new applications of AI combined with human collaboration could boost employment worldwide as much as 10 percent by 2020.

Analysts expect that people will become even more dependent on networked artificial intelligence (AI) in complex digital systems.

Some say we will continue on the historic arc of augmenting our lives with mostly positive results as we widely implement these networked tools. Some say our increasing dependence on these AI and related systems is likely to lead to widespread difficulties. Responses of experts on this report, 63% who said most people will be better off, 37% who said most people will not be better off. These are all statistics and experts assumption but nobody knows what the future holds. So, what do you think that advancing AI and related technology systems will enhance human capacities and empower them? That is, most of the time, will most people be better off than they are today? Or is it most likely that advancing AI and related technology systems will lessen human autonomy and agency to such an extent that most people will not be better off than the way things are today?

-Rutik Ambre
TE CMPNA07



IMPACT OF SOCIAL MEDIA ON YOUTH

A glance at the news channels in India is enough to tell you that the Election season is ripe and whether you like it or not, it's coming. Yes, the 'chowkidars' and the 'shahzadas' are going to blow their trumpets loud enough to woo the people into voting for them. However, this time the battle is going to be on a different turf altogether. The parties have all become aware that if they want to have any sort of influence on people, they have got to be on Social media. So this got me wondering that how social media has started to affect our lives so much that it has got political parties to carve out their IT cells. How are our likes and comments on Facebook going to be instrumental in deciding the button we are going to press on the EVM? Therefore, I decided to study the impact of social media on human life and more importantly the youth.

The definition of social media states that: "Social media is the collective of online communications channels dedicated to community-based input, interaction, content-sharing and collaboration". The first interaction for most of us with the world of social media was through Facebook. Facebook, the giant which started off as a weird 'Hot Or Not' website in 2003 called as 'Facemash'; to a company minting out a revenue of 55.838 billion as of 2018. In 2006, Facebook opened up to every 13 year old, having a valid email-id. Soon, it started commercial advertisements as well as sponsored games. Facebook became the favourite pastime of people as more 50% users started to spend an average of 1.4 hours daily on it. And that's where laid the opportunity of drilling something in people's minds. A like on a certain page meant more and more feed from that page and soon Facebook started to become the factory of 'fake news' and thereby influencing people in believing into a lie. Twitter is a micro-blogging site in which users are allowed to express their thoughts in no more than 140 words (later incremented to 280). Soon, Twitter became a hate spewing cobra spitting poison into people's minds. The 2014 elections in India saw the advent of the importance of social media for political campaigning. So did the presidential elections in the US in 2016, where the current president has had some infamous rants on Twitter. Indeed, Facebook and Twitter have become the 'Jay and Veeru' of modern times that each party's Thakur must have on their side.

HATE: Four letters which negatively impact a person and thereby a society is the most unfortunate child of the jargon of social media.

Gurmehar Kaur, a 20 year student of the Delhi University received rape and death threats just for expressing anti-war views. A gunman opened fire on a mosque in Christchurch, New Zealand while live streaming the video of the massacre on Facebook live just to express his hate towards the non-white race. Celebrities, famous people are often at the receiving end of trolls and abuses as everyone now has a license to spew venom. Thus, the supposed means of 'connecting people' have now turned into unwarranted licences to fire hate missiles.

However, social media has some positive impacts too. It gives the power to people to express themselves thereby laying a platform for talent to shine. Various talented people who have been deprived of opportunities have found their talent being recognized and appreciated on social media. Sanjeev Srivastav, famously known as Dancing Uncle, had been dancing for 25 years without much recognition, until a video of him dancing on a Govinda song became viral. Justin Bieber did start off his career uploading videos of himself singing covers on YouTube, with the help of his mother. Getting recognised by a talent manager in 2007, he signed to RBMG, released his debut album 'My World' in late 2009. The rest is history. A variety of Youtube content creators like Bhuvan Bam, Felix Arvid Ulf Kjellberg (or PewDiePie), etc. have become household names owing to social media. Also, social media has opened the floodgates to knowledge as news spreads like wildfire over it thus increasing awareness. Also, the recent trend of memes can be effectively used to educate people about current happenings.

Social media, one can conclude, is the mirage which one cannot surely fall for, but at the same time cannot ignore it.

-Pushpak Chaudhari
SE CMPNA 16



Young Adults hunger for Social networking

“As far as self-confidence goes, so much of social media is about approval, getting likes, comparing our lives to others - meanwhile confidence is an inside job. It's about how you feel about yourself regardless of what anyone else does or thinks. It's a knowing that you're human, you're flawed and you're awesome in your way.”
- Jon Sincero

For how long can you stay away from social media? Or can you control yourself from not checking Whatsapp, Facebook or Instagram for few hours or so? How difficult will it be? Well, Try it yourself. See, whether it turns out to be good or worst for you.

Remember few years back, when smartphones were not yet in the market and there was no Whatsapp or Facebook, people used to have prepaid and post-paid plans and even for sending a single “Hey” message it would charge 1 rupee or 50 paise. At those times, calling or text messaging was expensive. We as teens needed to ask for money from our parents for keeping a balance in our phones. We had to sustain in this money for the whole month. Sometimes the mind says those days were really best. You did not need to keep much of the conversation with the people or no one's just randomly texting you for no reason. Once you are at home from your workplace, school or college no one's going to randomly disturb you. That used to feel like ultimate peace. Is that the exact scenario these days? I guess nowadays we move with the same burden from our house to work and then from work to house. Even weekends don't feel that relaxing as it was those days. This is not about some centuries ago; this change is just about a decade ago. Everything's changing so fast and people are too simultaneously. Sometimes we need time to adapt to the change. But nowadays it all seems casual.

People are so hinged to cell phones. Being the witness, as we travel every day on any locomotives like train, bus etc. there would be no person who's not glued to his/her phone. Instead of reading newspapers or books or enjoying the scenery, people are just glued to their small handy toy.

Let us not be biased with respect to social media. We all know what problems the today's generation is facing these days. But let's just discuss positive and negative impacts of social media in length.

Positive impacts of Social Media:

Education: When we talk in terms of education, social media has a very crucial role to play. It quenches the curiosity in the people's mind of every age group. People can access the info, share the info, educate themselves. These days there are so many education platforms which gives free education to the people all around the globe. It has become very easy to get knowledge from renowned experts and professionals through the social media. You can easily follow anyone to boost your knowledge. Regardless of your educational background, you can learn various skills without even paying for them. Nowadays, 59% of schools say their students use social networking for educational purposes.

Social Media Is a Way to Enhance our Connectivity: It is an effortless way to connect with the like-minded people. You are just a click away from an incredible number of such people. Regardless of discrimination on the grounds of caste, religion, or location, social networks are helpful in reviving and preserving relationships with other people. It has become easier for us to connect with business people, family and friends. Even, many top most companies directly approach candidates through social networking sites like LinkedIn, Internshala and much more.

An Important Component for the Business:

Social media skills have long-since stopped being considered niche. It affects the whole way organizations/institutions run and grow. Another one is increase in job opportunities; in the US, recent job reports have generally been met with enthusiasm and positivity. Unemployment continues to drop to 10-year lows and most economists believe America is approaching "full employment" wage growth remains in positive territory.

Negative Impacts of Social Media:

Mental Health: A team of Australian researchers conducted two studies and found that compulsive internet use by adolescents leads to poorer mental health. We all know our physical health is important, but it's easy to think of our mental health as a secondary concern that we need to take care of on our own. But the reality is that conditions like depression and anxiety are highly treatable.

Vulnerable to Crime and Suicidal Rates: It's easy enough to lay the blame squarely on new technology. Not only have people live-streamed their suicides, but mysterious dark forces have snared vulnerable teens into killing themselves through 'challenges' like the Blue Whale challenge.

Wastage of Time: According to an estimation made, 28 percent of every knowledge worker's day could be wasted because of unnecessary interruptions that include instant messaging, spam e-mail, telephone calls and the Web in general. The most important thing to understand is that the misuse of

technology that has the potential to make your potential go down in a second. So, it is up-to us whether to use it or misuse it because at the end, either it will be impacting you either positively or negatively.

"Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road." – Stewart Brand

**-Sakshi Singh
TE CMPN-B**



Mobile phones and kids

Today, mobile phones have taken over the world. Elementary school-aged children start asking, or let's say begging, for these forms of technology before they can even tie their shoes. Phones are no longer just communication devices. They are literally pocket-sized computers. From work to entertainment to emails and IMs, everything can be done through a mobile phone.

Nowadays many parents hand over their phones to their children to deal with their temper tantrums. Slowly, their use increases and they are addicted to them in no time. Although no long term research has been carried out on the effects of smartphones on kids, a lot of data points towards the adverse effects on their physical and mental growth.

Cell phone radiation has always been a debatable topic. A lot of inconclusive data points towards stunted brain development and cognitive functions especially in children below the age of eight. We can't tell for sure whether it is completely safe. One can never be too cautious.

Long periods of staring at the screen causes significant eye strain such as dry eyes, burning sensation and light sensitivity. The constant focus on the screen tires out the eye muscles and the lens which can lead to long term focusing problems. Blue light emitted from phone screens can penetrate all the way to the retina. Too much exposure to blue light can damage light sensitive cells in the retina resembling macular degeneration, which can lead to permanent vision loss. One can only imagine the extent of damage to the eyes in case of children who have underdeveloped optical sensors.

Mobile phones are also the cause of poor posture and children using phones might never develop a good posture. The tilted head along with

rounded shoulders creates extra wear and tear of on neck, upper spine, and back and can lead to spinal degeneration.

Mobile phone games have only fuelled the addiction. Children now have a platform full of exciting games which hinders their creativity

and optical sensory development. Kids now prefer these virtual playgrounds over real ones. They no longer want to go outside to play. Their interest in sports is continuously diminishing.

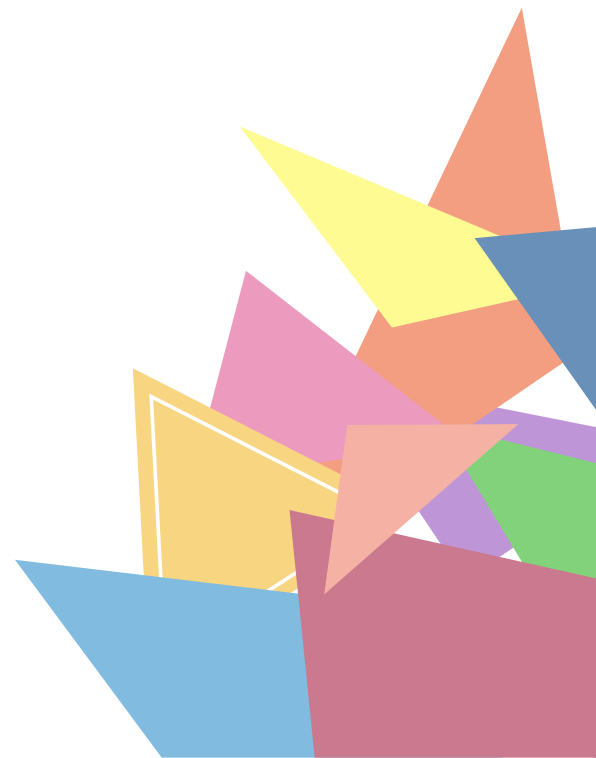
Instant gratification from their phones is killing their ability to cope with stress. Whenever older kids are stressed out even a little bit, they turn to their smartphones. Social media is the biggest reason for this problem. Kids are always trying to one-up their friends on social media and trying to put forth a life that is far from the truth.

All this is because of unsupervised use of mobile use by children. Most parents are unaware of the parental control features in their phones. Many children are exposed to adult content which they may not be able to comprehend. This may hamper their mental well being.

There is one area where phones have proved to be a boon. Specifically tailored learning apps are really changing the way children are taught today. With audio visual , the learning process is interactive children are easily able to absorb and retain more information time-efficiently. It is helping them learn topics that they are interested in . They are able to clear their doubts anytime and anywhere.

Parents should be aware of the side effects a Smartphone can harbor. Moderation is the key. With unlimited source of knowledge available on the internet, supervised mobile use by children might prove to be a boon.

Dhruv Agrawal
TE-CMPN-A



INTERVIEW



A PSYCHOLOGICAL POINT OF VIEW

Can you tell me about your profession?

I'm a Clinical Psychologist.

How have emerging technologies affected your profession?

It has affected the field in many positive ways. As psychologists, we have to gather a significant amount of information about an individual's intellectual, emotional, behavioral, and social aspects for their treatment. We conduct various tests to collect such information. Testing is also required for research purposes. But, for research, data is required in a substantial amount. Technology has helped positively in this process of data collection and analysis. The enormous amount of data now can be analyzed using various software products which is easier. Also, it has good validity because it is not prone to human errors and biased judgment. Moreover, work is done in a significantly lesser amount of time than it would have taken to do it manually.

In addition to it, the major impact of the technology, concerning social media, has been in creating awareness about psychological issues and the availability of the help centers. The raised awareness has led to an increase in the number of people seeking professional help to address their issues.

The availability of various chatbots and online counseling services has provided a great alternative to people, who are uncomfortable to discuss their personal or professional issues face to face, to seek professional help rather than keeping their concerns to themselves.

What are your views on addiction to technology?

In today's fast paced world, human are busy planning, executing, achieving goals, and have to juggle among different activities. Technology has helped reduce down the efforts by a considerable amount, making the tasks to be carried out seamlessly. Due to ease of access and convenience provided by technology, human are becoming more dependent on it. But, this dependence has risen to such a level that inaccessibility to technology, even for a shortest period of time, can make some people stress a lot.

When a person uses phones, computers, the internet, social networking sites, and games excessively, to such an extent that it negatively affects one's life, then it can be termed as addiction to technology. Generally, a person, addicted to technology, is unable to control one's urge to constantly go through their social media account feed or play games, they tend to spend more time unnecessarily on such sites instead of completing assignments or working even if they know the deadline is approaching. Online shopping is another type of addiction that may give rise to financial crises or even debts, in serious cases.

The reason behind the increased addiction to technology is increased stress. One faces so much pressure, expectations, and burdens in everyday life that they want some world to escape from these. Time spent on such gadgets and portals does help one to forget their daily stressful issues. The relief is so much that a person overdoes it and gets addicted to the very savior. Another reason is the ease of availability of gadgets to young children. Early exposure to such things creates more liking and dependency.

What is the age group of people that are addicted to technology?

Mainly teenagers and young adults are more found to be addicted to technology. Also, nowadays, children are getting very much involved with technology.

How do you think is it affecting their mental and physical health?

Due to its ease of access, convenience, and many such qualities, technology is considered positive. However, addiction is unhealthy. Psychologically speaking, when a person is addicted to a thing, unavailability or inaccessibility of that thing causes a person to undergo extreme stress. Instead of facing their life problems, people tend to avoid them by using

technology as an escape route. Therefore, as the problems don't get resolved, it makes the person burdened with the stress of solving the same problems later on. This attitude of neglecting life problems hampers the development of a healthy mechanism to face life hurdles. Emotionally and socially, a person might get withdrawn as he/she skips the time spent with family, friends, or loved ones and in turn, spends it on the Internet or playing games. It may also cause impulsivity, low self-esteem, anxiety, and depression.

People with addiction, develop an unhealthy lifestyle majorly due to poor sleeping patterns and bad eating habits. It may contribute to increased obesity and other health issues as there is less physical activity. It may also cause headache, body pain, and ophthalmic problems.

Is media playing a catalyst in boosting depression?

There is a correlation between internet addiction and increasing cases of depression. Excessive use of the internet has a strong impact on our mental health. Especially it is related to developing low self-esteem and anxieties. A person spending excessive time on social networking sites needs a social circle in which they are recognized and accepted. They follow the lifestyles of their virtual friends. It leads to increased pressure to be more and more accepted and appreciated by others. When they do not receive the required attention, it may lead to low self-esteem, anxiety, and depression.

In your perspective, increased virtual interaction is good or bad?

There are two sides to every coin. Increased virtual interaction has indeed caused people to stay in the virtual world and less emotionally connected to people in actual life. However, virtual interactions have also played a very positive role. People who lack healthy emotional and social interactions in the real world, for any reason, found a way to overcome these issues due to virtual connections. There are a lot of people who deal with loneliness and need social bonds. They are helped by virtual interactions. People with social anxiety are found to be in need to be with and get accepted by people. But, they fear rejection and being judged by others. They either avoid social interactions or are excessively cautious about these things during actual interactions where they are expected to have opinions or act on something. These people, however, are much comfortable in virtual space, where they do not feel pressurized to behave in a certain way and can still interact with others.

And without doubt, the internet and various social sites have helped people get closer to each other, to know about each other irrespective of the distance separating them. So it is a positive aspect of virtual social connections.

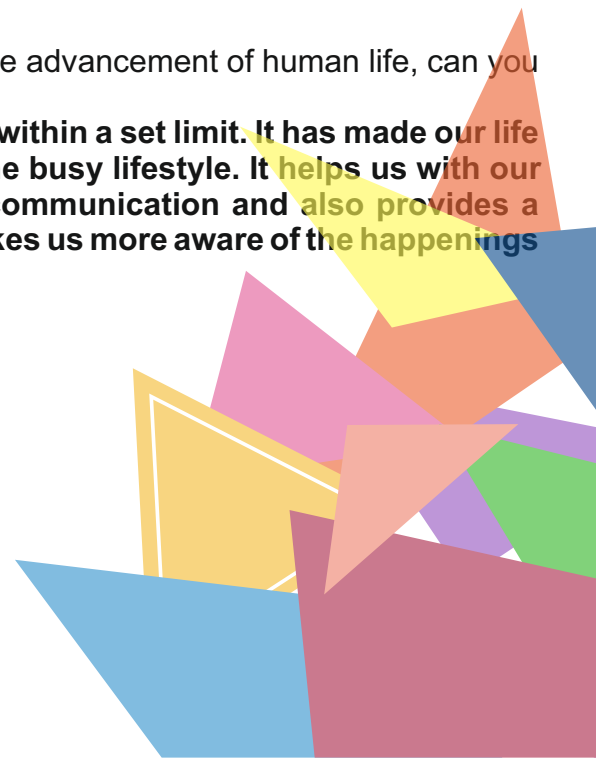
Can the technological factors, that have affected humans negatively, play a role in reversing its effects?

Yes. There are a lot of online chatbots and virtual counseling services available to help people under psychological distress. Moreover, various games and apps have proven to help release stress. Also, there are apps available, which help people monitor their medical records on a real-time basis. This helps us to be more cautious about health.

As we know, the technological boom has been a torchbearer for the advancement of human life, can you elaborate on the positive effects of technology on the human mind?

Technology is said to have many positive effects when it used within a set limit. It has made our life very easy and convenient, thus alleviating the stress out of the busy lifestyle. It helps us with our day-to-day activities, promotes convenient and hassle-free communication and also provides a good means of relaxation from our hectic schedule. Also, it makes us more aware of the happenings of our surroundings and that around the world.

Mrs. Sayali Vartak
Clinical Psychologist
Nair Hospital, Mumbai



A SPIRITUAL POINT OF VIEW

Can you tell me about your profession?
I'm a Psychotherapist and a Counselor.

How have emerging technologies affected your profession?
Earlier, we used to deal with cases extensively related to substance abuse, suicidal thoughts, family problems, et cetera. But, nowadays, there has been a major turn of events. Today, the cases observed on a large scale are related to mobile addiction. I feel that this kind of addiction is much more dangerous than other prevailing addictions we've heard of and have witnessed.

What are your views on addiction to technology?
Everyone needs to understand the difference between needs and wants. When you are addicted to something, you feel that your want is the need. People have become very impersonal. It feels like their lives have been dominated by some external agencies and they have completely lost their control over their own life. People have also started ignoring their culture due to the technological influence. Thus, especially the youth or the younger generation must learn to differentiate between their needs and wants.

How do you think is it affecting their mental and physical health?
Speaking from a spiritual perspective, a person's conscious has two parts. Our mind is filled with negative and positive thoughts. The threshold of the house is made to keep the negative thoughts at bay. The way to cleanse our minds of negatives is to leave them behind at the door, at the threshold, and enter your house with a positive outlook. But, as you enter the house, you are accompanied by your phone. The cell phone is one of the evils of life, which makes your mind more negative. Your mobile phone or gadget is one of the gateways that allow positivity as well as negativity in your mind. Out of these, the negatives have a greater impact on your mind and tend to compromise the sanctity of a pure mind. Gratefulness, consciousness, sensitivity are all the quality of a subtle body but with overuse of technology, our bodies have become gross.

So do you think technology is only causing harm to human mind?
I would like to assert that technology is not bad. The outcomes of its use depend on the way how efficiently and correctly one uses it. For example, consider a knife; if one commits crimes using it, the knife is considered a bad tool. But, on the other hand, if one uses it to operate on a patient to save their life, the knife becomes a life savior. The same is with technology.

What do you think has been the best usage of technology?
I think social media has been of much use to mankind. Previously, we used to know about the happenings around the world only by the medium of news channels and newspapers. There wasn't an exact method to determine if the news was true or a hoax. But, now, due to the availability of various sources on the Internet, it becomes easy to verify the authenticity of any message or news piece.

Are there any other aspects whose effects are similar to that of social media?
Earlier only kids used to play videogames, now you can observe everyone around you is either stuck to their phones or gaming console may that be an 8-year-old kid or an 80-year-old person. This trend of getting immersed in games continues. It started maybe with packman and now PUBG is in talks but the scenario hasn't changed. Only the thing that has changed is the number of people, which has increased and also there is an involvement of people belonging to all the age groups where previously it was restricted to one type.

In your perspective, increased virtual interaction is good or bad?

I have patients from the UK, USA, and many other countries. For us, it isn't possible to meet and conduct sessions in person. So, this concept of virtual interaction has proven to be very useful as it negates the idea of us being separated by distance and helps us fulfil the goal which here is conducting sessions. Phone calls are fine, but video chat has had a better impact as it is important for me to understand

What a person is trying to convey, which isn't completely possible by only listening to the person's voice, their facial expressions and body language are also important. What people speak in between the lines is equally important, so unless they sit in front of you, it isn't possible to figure out what they are trying to say.

Any other thoughts for our readers?

We shouldn't let technology rule our lives. If we give anything, the control of our life, it is sure that we will be the victims. So, we need to stop victimizing ourselves and take control of our lives to be a complete person. A complete person is the one who is physically healthy, physiologically skilful, psychologically sensitive, and intellectually wise and as a person he is grateful. Thus, everyone should strive to become a complete person.

**Mr. Rajesh Kadam
HOD-Department of Spiritual Care at Bhakti Vedant Hospital
& Counselor at TCET**



ACHIEVEMENTS





Co-curricular Activities

1. SIH'19 Winners (Ministry of External Affairs)

Amit Tiwari – BE/B

Kartik Verma

Sanjay Varma

Nikhil Yadav

Kasturi Dhotre – TE/B

Ashwin Yadav – TE/B

2. SIH'19 Winners (MHRD)

Prashant Kapri –TE/A

Dolby Agarwal

Suchit Gupta

Manjyot Singh Nanra

Neharika Chaturvedi

3. SIH'19 Finalist (DPIIT)

Atharva Tendulkar – TE/B

Athashree Vartak

Shubham Yadav

Saloni Shetty

Rahul Yadav

Yogesh Bharambhe





Extra Curricular Activities

Akash Singh – TE/B

Carrom – Bronze Medal, BITS Pilani





Academic Achievements

Final Year Toppers

Amit Tiwari

10.00

Tejas Gupta


9.84

Vivek Saroj

9.84



Third Year Toppers



Prashant Kapri	10.00
Karan Kukreja	10.00
Sandesh Gade	9.93
Rrutum Lavana	9.81
Aishwarya Gupta	9.70
Dolby Agarwal	9.70
Mahima Choudhary	9.70
Sruthi Harish	9.70
Mittal Jethva	9.70
Aishwarya Rane	9.63
Nilesh Jha	9.56
Atharva Tendulkar	9.56
Kasturi Dhotre	9.56
Tushar Rajdev	9.26
Athashree Vartak	9.19

Second Year Toppers

Saurabh Mishra	10.00
Rutik Ambre	10.00
Harsh Ramani	10.00
Sarandeep Singh	9.85
Nikita Mahajan	9.81
Manju Choudhary	9.65
Ankit Singh	9.65
Rakshit Shetty	9.54
Vij Patel	9.50
Jeet Inani	9.46



Student Editorial Committee



*(L-R) : Parth Singh, Shrishti Singh, Athashree Vartak,
Adit Rathi, Anand Vishwakarma, Rakshit Shetty.*

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-Team Nimbus 8.2