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The ferm, Moonlighting describes a practice where an employee holds a secondary job or work besides having a full time job at an organization. Having a secondary source of job would be anything working extra hours or part time or as a freelancer. There are various types of , moonlighting which includes Blue, Quarter, -Half and Full moonlighting with several different definitions.

Moonlighting was very firstly lined in 1957 as to mainly identify the employee having a secondary job

4specifically at night. Moonlighting expanded in India after thsevere duration of Covid-19 principally for the IT industry. One of the major companies in the IT sector like Wipro strictly prohibited moonlighting to their employees. Various Organizations believe that moonlighting by any employee would directly affect their productivity and the company faith.
There is no legal structure against Moonlighting . Although all prohibitions by the organizations are imposed as per their own employee policies.


## 

 A NEW EREED OF CㅂGERCRImE
## WHAT IS

## CRYPTOJACKING?:

THE MOST PROMINENT QUESTION CRYPTOJACKING IS A TYPE OF CYBERCRIME THAT INVOLVES THE UNAUTHORIZED USE OF PEOPLE'S DEVICES LIKE COMPUTERS. SMARTPHONES, TABLETS, OR EVEN SERVERS BY CYBERCRIMINALS TO MINE FOR CRYPTOCURRENCY.

LIKE MANY OTHER FORMS OF CYBERCRIME, THE MOTIVE IS PROFIT, BUT UNLIKE OTHER THREATS, IT IS DESIGNED TO STAY COMPLETELY HIDDEN FROM THE VICTIM. WITHOUT KNOWING WHAT'S INTRUDER HAS DONE OR TRYING TO FETCH FROM WITH THE VICTIM'S CRYPTO ACCOUNT.

IT TAKES A LOT OF COMPLEX
MATHEMATICAL CALCULATIONS AND A
LOT OF COMPUTING POWER. HACKERS
CAN USE MALWARE TO INSTALL ON
THE VICTIM'S DEVICE AND RUN SILENTLY IN THE BACKGROUND


# HOW DOES CRYPTOJACKING 

 WORK?:BEGINNING OF THE GNARLIESTJOB!CRYPTOJACKING TYPICALLY STARTS WITH A VICTIM UNKNOWINGLY DOWNLOADING MALWARE ONTO THEIR COMPUTER. THIS CAN HAPPEN THROUGH A VARIETY OF METHODS. SUCH AS CLICKING ON A MALICIOUS LINK OR DOWNLOADING A FAKE SOFTWARE UPDATE. ONCE THE MALWARE IS INSTALLED. IT WILL RUN SILENTLY IN THE BACKGROUND OF YOUR COMPUTER, USING YOUR PROCESSING POWER TO MINE CRYPTOCURRENCY FOR THE HACKERS
CRYPTOJACKING IS A THREAT
THAT EMBEDS ITSELF IN COMPUTERS AND BEGINS TO USE THE RESOURCES TO MINE CRYPTOCURRENCY. THERE ARE ALMOST 3000 DIFFERENT FORMS OF CRYPTOCURRENCY, MOST OF THEM HAVE VENTURED INTO THE PHYSICAL WORLD THROUGH CREDIT CARDS AND OTHER PROJECTS, BUT SOME OF THEM STILL REMAIN VIRTUAL.

## WHAT ARE THE DANGERS OF CRYPTOJACKING?: VICTIM'S WALLET CRISIS!

EVERYTHING BEGINS WITH SLOWING DOWN OF DEVICE(S), PERFORMANCE WILL GRADUALLY FALL FROM THE DAY OF ATTACK DEVICE WILL COMPLETELY LACK IN PROCESSING THE TASKS THAT IT DID BETTER BEFORE, THIS HAPPENS DUE TO MALWARE RUNNING IN THE BACKGROUND. CONSUMING ALL THE PROCESSING CAPACITY OF DEVICE AND ALSO LEADS TO INCREASE IN ELECTRICITY BILLS RESPECTIVELY. THIS ALSO CAUSES OVERHEATING OF DEVICES DUE TO THE MINING. WHICH REQUIRES HUGE PROCESSING POTENTIAL. WHICH CAN DAMAGE HARDWARE SOME CRYPTOMINING SCRIPTS HAVE WORMING CAPABILITIES THAT ALLOW THEM TO INFECT OTHER DEVICES AND SERVERS ON A NETWORK. THIS MAKES THEM HARDER TO IDENTIFY AND REMOVE. THESE SCRIPTS MAY ALSO CHECK TO SEE IF THE DEVICE IS ALREADY INFECTED BY COMPETING CRYPTOMINING MALWARE. IF ANOTHER CRYPTOMINER IS DETECTED, THE SCRIPT

## HOW CAN YOU PROTECT YOURSELF FROM CRYPTOJACKING？：

SAVE YOUR TEARS AND CRYPTOCURRENCY！
THE BEST WAY TO PROTECT YOURSELF FROM CRYPTOJACKING IS TO KEEP YOUR COMPUTER＇S SOFTWARE UP TO DATE， AVOID DOWNLOADING ANY SUSPICIOUS SOFTWARE OR CLICKING ON SUSPICIOUS LINKS IGNORE POP－UPS THAT ARE USUALLY SEEN ON WEBSITES WHILE SURFING
ALSO BE AWARE OF FREE ANTIVIRUS
SOFTWARES THAT JUST PRETENDS TO BE AN ANTI－VIRUS，
BUT LATER ON COULD THREATEN DEVICE（S） USE BROWSER EXTENSIONS THAT
BLOCK CRYPTOCURRENCY MINING SCRIPTS
THESE EXTENSIONS WILL BLOCK ANY ATTEMPTS TO MINE CRYPTOCURRENCY IN YOUR BROWSER，PREVENTING YOUR COMPUTER＇S PROCESSING POWER FROM BEING USED WITHOUT YOUR KNOWLEDGE OR CONSENT．


## USE AD BLOCKERS：

CRYPTOJACKING SCRIPTS ARE OFTEN DELIVERED THROUGH ONLINE ADS INSTALLING AN AD BLOCKER CAN BE AN EFFECTIVE WAY OF DODGING THEM CHOOSE AD BLOCKER THAT CAN BOTH DETECT AND BLOCK MALICIOUS CRYPTOJACKING CODE

BE ALERT TO THE LATEST CRYPTOJACKING TRENDS：

CYBERCRIMINALS ARE CONSTANTLY MODIFYING CODE AND COMING UP WITH NEW DELIVERY METHODS TO EMBED UPDATED SCRIPTS ONTO YOUR COMPUTER SYSTEM．BEING PROACTIVE AND STAYING ON TOP OF THE LATEST CYBERSECURITY THREATS CAN HELP YOU DETECT CRYPTOJACKING ON YOUR NETWORK AND DEVICES AND AVOID OTHER TYPES OF CYBERSECURITY THREATS

## DISABLE JAVASCRIPT：

WHEN SURFING THROUGH THE INTERNET DISABLING JAVASCRIPT CAN PREVENT CRYPTOJACKING CODE FROM INFECTING YOUR COMPUTER．HOWEVER，ALTHOUGH THAT WILL INTERRUPT THE DRIVE－BY CRYPTOJACKING．THIS COULD ALSO BLOCK YOU FROM USING FUNCTIONS THAT YOU NEED

## BLOCK PAGES KNOWN TO DELIVER CRYPTOJACKING SCRIPTS：

TO PREVENT CRYPTOJACKING WHILE VISITING WEBSITES．MAKE SURE EACH SITE YOU VISIT IS ON A CAREFULLY VETTED WHITELIST．YOU CAN ALSO BLACKLIST SITES KNOWN FOR CRYPTOJACKING，BUT THERE MAY STILL BE MANY NEW UPCOMING CRYPTOJACKING PAGES THAT CAN LURE YOUR DEVICES AND STILL LEAVE YOUR DEVICE OR NETWORK EXPOSED TO ＇CRYPTOJACKERS＇

## BRAIN

## DRAIN \& GAIN

THERE ARE TWO CONCEPTS THAT REFER TO THE MOVEMENT OF HIGHLY SKILLED OR EDUCATED INDIVIDUALS FROM ONE COUNTRY OR REGION TO ANOTHER

## BRAIN DRAIN

brain drain refers to the EMIGRATION OF SKILLED OR EDUCATED INDIVIDUALS FROM
 THEIR HOME COUNTRY TO ANOTHER COUNTRY, OFTEN BECAUSE OF BETTER JOB OPPORTUNITIES, HIGHER SALARIES, OR BETTER LIVING CONDITIONS. THIS CAN HAVE a negative impact on the cOUNTRY OF ORIGIN AS IT LOSES ITS SKILLED WORKFORCE AND MAY STRUGGLE TO FILL IMPORTANT ROLES.


## BRAIN GAIN

OTHER HARAIN GAIN. ON THE IMMIGRATION OF SKILLED OR EDUCATED INDIVIDUALS FROM ONE COUNTRY TO ANOTHER. THIS CAN HAVE A POSITIVE IMPACT ON THE RECEIVING COUNTRY AS IT GAINS SKILLED WORKERS WHO CAN CONTRIBUTE TO ITS ECONOMY AND SOCIETY

## ECONOMIC DEVELOPMENT:

BRAIN DRAIN AND BRAIN GAIN
ARE OFTEN USED IN
DISCUSSIONS ABOUT

- IMMIGRATION POLICY
- ECONOMIC DEVELOPMENT.
- GLOBALIZATION
- SOCIAL DEVELOPMENT


## IMMIGRATION POLICY:



GOVERNMENTS MAY IMPLEMENT POLICIES TO ATTRACT OR RETAIN SKILLED WORKERS, SUCH AS OFFERING INCENTIVES FOR FOREIGN PROFESSIONALS TO IMMIGRATE OR INVESTING IN EDUCATION AND TRAINING PROGRAMS TO RETAIN HOME-GROWN TALENT.

OVERALL, THE CONCEPTS OF BRAIN DRAIN AND BRAIN GAIN ARE USEFUL IN UNDERSTANDING THE MOVEMENT OF SKILLED WORKERS AND THE IMPACT IT CAN HAVE ON DIFFERENT COUNTRIES AND REGIONS
--SUJAY SONAWANE (FYCS)

COUNTRIES WITH HIGH LEVELS OF BRAIN DRAIN MAY STRUGGLE TO DEVELOP THEIR ECONOMIES AND MAY HAVE DIFFICULTY ATTRACTING FOREIGN INVESTMENT. ON THE OTHER HAND, COUNTRIES THAT EXPERIENCE BRAIN GAIN MAY BE ABLE TO BOOST THEIR ECONOMIC GROWTH AND COMPETITIVENESS BY ATTRACTING SKILLED WORKERS.

## GLOBALIZATION:



THE MOVEMENT OF SKILLED WORKERS ACROSS BORDERS IS A KEY ASPECT OF GLOBALIZATION, AND BRAIN DRAIN AND BRAIN GAIN ARE IMPORTANT FACTORS
TO CONSIDER WHEN ANALYZING THE IMPACT OF GLOBALIZATION ON DIFFERENT COUNTRIES AND REGIONS.

## SOCIAL DEVELOPMENT:

BRAIN DRAIN CAN ALSO HAVE
NEGATIVE IMPACTS ON SOCIAL
DEVELOPMENT, AS IT MAY RESULT
IN A LOSS OF SKILLED
PROFESSIONALS IN CRITICAL AREAS
SUCH AS HEALTHCARE AND
EDUCATION. BRAIN GAIN, ON THE OTHER HAND. CAN LEAD TO A MORE DIVERSE AND SKILLED WORKFORCE WHICH CAN BENEFIT SOCIETY AS A WHOLE.

## no human Lancuace



NOT FOR HUMANS BUT HUMANS HAVE TO LEARN.
IO COMMUNICATE WITH COMPUTERS AND HAVE FUN.

TO LEARN.
THERE IS NO SPECIFIC AGE AND IT DOESN'T MATTER. YOU'RE SMART OR AVERAGE.

HUMAN LANGUAGE HAS GRAMMAR IT HAS SYNTAX, SIMILARLY.
AND YOU WILL MAKE MANY SYNTAX ERROR
IN STAGES. WHICH ARE EARLY.
WHILE USING THIS LANGUAGE, YOU WILL NOT STAMMER.


BUT CAN BUILD SOMETHING AND BE A PROGRAMMER.

USING PROGRAMMING LANGUAGE.
YOU CAN'T GOSSIP BUT, CAN ENJO CODING TRIP

CARBON-60 THE FUTURE OF DATA STORAGE:
CONVERGENCE OF NANOTECHNOLOGY AND INFORMATION SCIENCE


OVER THE YEARS, TECHNOLOGY HAS ADVANCED. AND DATA STORAGE DEVICES HAVE BECOME MORE SOPHISTICATED. AS THE AMOUNT OF DATA GENERATED CONTINUES TO GROW, THE NEED FOR EFFICIENT AND RELIABLE DATA STORAGE TECHNIQUES BECOMES IMPORTANT. HOWEVER,

THERE IS A LIMIT TO HOW SMALL WE CAN MAKE THE DEVICES WHILE STILL MAINTAINING THEIR EFFICIENCY. THE SOLUTION TO THIS PROBLEM MAY LIE IN THE USE OF FULLERENES,SPECIFICALLY THE FULLERENE MOLECULE C6O. AS A MEANS OF STORING DATA.

STORING DATA :
C60 IS A STABLE, SPHERICAL MOLECULE THAT EXHIBITS MANY UNIQUE PROPERTIES, INCLUDING ITS ABILITY TO CONDUCT ELECTRICITY. HIGH THERMAL STABILITY, AND ITS INTERACTION WITH LIGHT.THE STORAGE OF DATA IN FULLERENES IS POSSIBLE DUE TO C6O'S LARGE INTERNAL CAVITY. BY FILLING THIS CAVITY WITH A SMALL MOLECULE LIKE HYDROGEN OR NITROGEN. RESEARCHERS CAN CREATE A STABLE, BINARY SYSTEM THAT CAN BE USED TO STORE DATA. THE DATA CAN BE WRITTEN TO THE FULLERENE MOLECULE BY USING A LASER TO HEAT A SMALL AREA OF THE SURFACE, CREATING A TEMPORARY CAVITY THAT CAN BE FILLED WITH A SMALL MOLECULE, SUCH AS HYDROGEN OR NITROGEN. TO REPRESENT A BINARY DIGIT. BY CONTROLLING THE AMOUNT OF HEAT APPLIED, RESEARCHERS CAN CONTROL THE MOVEMENT OF THE SMALL MOLECULE, ALLOWING THEM TO WRITE DATA


READING DATA:

ONTO THE MOLECULE.

ADVANTAGES :
ONE OF THE ADVANTAGES OF USING FULLERENES TO STORE DATA IS THAT THE DATA IS INCREDIBLY STABLE. UNLIKE TRADITIONAL data storage methods. Which rely on MAGNETIC OR OPTICAL MEDIA THAT CAN DEGRADE OVER TIME, FULLERENE-BASED DATA STORAGE IS MUCH MORE RESISTANT TO DAMAGE FROM HEAT, LIGHT, AND OTHER ENVIRONMENTAL FACTORS. THIS MEANS THAT DATA STORED IN FULLERENES COULD POTENTIALLY LAST FOR MILLIONS OF YEARS, MAKING IT IDEAL FOR ARCHIVING IMPORTANT INFORMATION OR USING IT AS A TIME CAPSULE
ANOTHER ADVANTAGE OF USING FULLERENES TO STORE DATA IS THAT THEY ARE INCREDIBLY
SMALL. C6O MOLECULES ARE ONLY ABOUT ONE NANOMETER IN DIAMETER. WHICH MEANS THAT THEY COULD POTENTIALLY BE USED TO CREATE INCREDIBLY DENSE DATA STORAGE DEVICES. THIS COULD ALLOW FOR MASSIVE AMOUNTS OF data To be stored in a very small space, WHICH COULD BE USEFUL IN REDUCING THE HUMONGOUS SIZES OF DATA CENTERS.

THE PROCESS FOR RETRIEVAL IS SIMILAR TO READING DATA FROM OPTICAL STORAGE DEVICES. SUCH AS CDS OR DVDS. WHEN LIGHT IS SHONE ON A FULLERENE MOLECULE, THE ELECTRONS IN THE MOLECULE ABSORB THE ENERGY FROM THE LIGHT AND MOVE TO HIGHER ENERGY LEVELS. WHEN THE ELECTRONS RETURN TO THEIR ORIGINAL ENERGY LEVELS. THEY RELEASE THE ENERGY THEY ABSORBED IN THE FORM OF LIGHT. THIS LIGHT CAN BE MEASURED AND USED TO DETERMINE WHETHER A SMALL MOLECULE, SUCH AS HYDROGEN OR NITROGEN. IS PRESENT IN THE CAVITY OF THE FULLERENE MOLECULE. THE PRESENCE OR ABSENCE OF THE SMALL MOLECULE CAN BE USED TO REPRESENT A BINARY DIGIT. ALLOWING THE DATA TO BE READ FROM THE MOLECULE.

CONCLUSION:
IN CONCLUSION. FULLERENE PROMISES TO BE A GREAT MEANS OF STORING DIGITAL DATA. WITH ITS POTENTIAL TO STORE DATA FOR MILLIONS OF YEARS AND ITS INCREDIBLY SMALL SIZE. FULLERENE-BASED DATA STORAGE HAS THE POTENTIAL TO REVOLUTIONIZE THE WAY WE STORE AND ACCESS

INFORMATION. WHILE THERE IS STILL MUCH RESEARCH TO BE DONE IN THIS AREA, THE POTENTIAL APPLICATIONS OF FULLERENES IN DATA STORAGE ARE EXCITING AND COULD HAVE A SIGNIFICANT IMPACT ON

THE TECHNOLOGICAL INDUSTRIES IN THE YEARS TO COME.

# RECAPITULATION OF CHATGPT CHATGPT EPITOMIZED USES 

AN AI-POWERED CHAT NETWORK CALLED CHATGPT, COMMONLY KNOWN AS GPT-3, IS SWEEPING THE GLOBE BY STORM. CHATGPT, CREATED BY OPENAI, EMPLOYS MACHINE LEARNING TO COMPREHEND NATURAL LANGUAGE AND PROVIDE REPLIES THAT RESEMBLE THOSE OF A HUMAN. ONE OF THE MOST COMPLEX CHAT SYSTEMS CURRENTLY AVAILABLE, CHATGPT CAN HAVE NUANCED DISCUSSIONS AND COMPREHEND CONTEXT THANKS TO ITS CUTTING-EDGE TECHNOLOGY



UNSUPERVISED LEARNING IS THE METHOD USED TO CREATE CHATGPT'S NOVEL TECHNOLOGY LARGE VOLUMES OF DATA ARE USED TO TRAIN THE AI IN THIS PROCESS, ENABLING IT TO RECOGNIZE PATTERNS AND DRAW CONCLUSIONS ON ITS OWN. THE END RESULT IS AN AI THAT CAN COMPREHEND NORMAL LANGUAGE AND PROVIDE CLEVER COMMENTS THAT RESEMBLE HUMAN SPEECH.

THE CAPACITY OF CHATGPT TO PRODUCE TEXT IN A VARIETY OF LANGUAGES IS ONE OF ITS MOST STRIKING CAPABILITIES. THE AI'S SOPHISTICATED LANGUAGE MODELING SKILLS. WHICH ENABLE IT TO COMPREHEND AND PROVIDE REPLIES IN A VARIETY OF LANGUAGES, MAKE THIS FEASIBLE.

CHATGPT HAS A NUMBER OF USEFUL USES IN ADDITION TO BEING USED FOR AMUSEMENT. FOR INSTANCE, IT MAY BE APPLIED TO CREATING NEWS STORIES, INSTRUCTIONAL TOOLS, AND CHATBOTS FOR CUSTOMER SUPPORT.

DESPITE CHATGPT'S OUTSTANDING CAPABILITIES. THERE ARE CERTAIN ISSUES WITH ITS APPLICATION. SOME INDIVIDUALS WORRY THAT ARTIFICIAL INTELLIGENCE (AI) MAY BE EXPLOITED TO PRODUCE FALSE INFORMATION. INCLUDING FAKE NEWS. TO PREVENT THESE PROBLEMS. OPENAI HAS PUT IN PLACE A NUMBER OF PRECAUTIONS. INCLUDING THE USE OF ETHICS.

IN CONCLUSION, CHATGPT IS A GROUNDBREAKING CHAT PLATFORM DRIVEN BY AI THAT IS REVOLUTIONIZING HOW PEOPLE CONNECT ONLINE. IT IS A POWERFUL
TOOL WITH A BROAD RANGE OF USEFUL APPLICATIONS BECAUSE OF ITS
SOPHISTICATED FEATURES. WHICH
INCLUDE MULTI-LANGUAGE SUPPORT AND CONTEXT COMPREHENSION.

OPENAI'S ETHICAL STANDARDS AND SAFETY MEASURES MAKE IT A SECURED
AND

TRUSTWORTHY PLATFORM FOR HAVING INTELLIGENT DISCUSSIONS. DESPITE CERTAIN PRIVACY AND SECURITY ISSUES WITH ITS USE.


## ONSET OF THE NEW COSMOS WITH THE POWER OF XR

## 

The Extending Reality (XR) is striking the world and changing the style we live in today. We all are fans of The Iron Man Franchisee. The Iron Man franchise is one of the reasons for the development of the XR to such an extent that the imaginations are transforming to optical visible reality in the real world. Few years ago it was just an imagination to live the lifestyle like the Tony Stark character in The Iron Man franchise but now it's becoming reality. The world is not far from the era where we all would be living with XR around us with the power of Artificial Intelligence (AI) extending the XR to the new level.


When

## ve used

 mans, the Jarvis, the VR powered helmet of the Iron Man suit were very fascinating to us but now such technology-actually-exists around us and is pushing us to the edge of transformation. "The Mogo Lens", the AR powered lens that has ability to display 14000 px /ich es into 0.2 diameter, this lens is developed by Mojo Vision Company based in the United States.[4] Another important noticeable thing from The Iron Man franchise is the XR powered technology which has the ability of scanning objects and portraying them to real space. Now such a technology has changed the way of study and healthcare In healthcare operating Rooms are transformed to AR powered to monitor the patient's health in a closed way as well as to look at the effect of medicine over their organs. Wow! This technology traces can also be seen in The Spider Man franchise named "Amazing Spider Man" when Peter Parker was helping Dr. Curtis to create the lizard gene.

Wait! Wait! Wait! Before discussing ahead let's see the history of today's topic, The Extended Reality (XR). " The Star Warl" movie was one of the most famous futuristic movies in its era. In 1956, cinematographer Mortan Heiling created "Sensorama", the first VR machine. Following his idea, an engineer from the Philco created the Headsight headset in 1961 for military purposes. In 1968, the first AR headset was created by The Professor Ivan Sutherland called it "The Sword of Damocles".[3] The development of the AR started in the early 1900s and now it's becoming a part of human society.
XR is not only impacting the movie Industry but also healthcare, study, research, warehousing, gaming construction, designing, lot, Social media, etc. The daily used XR technology based applications includes "The Nreal AR Glasses' ' which mixes real world with the digital world, Google translator for real time translation, Snapchat, Ikea, etc. We have started our XR topic with thelron Man franchise but we will never forget one of the most important parts of this franchise: The Jarvis. But we will talk about it next time. Till then be happy!

Explored Learn! Create and be the one of the, "Contributor to the Future!"

## VR AND SIMULATION IN MILITARY

-- UIKRS R. JRISயRL (SபCS)
During the last few years, VR and simulation technologies are growing rapidly and the tech industry has also made valuable investments in the manufacturing of VR and simulation products. Virtual reality technology is developed in such a way that a person is able to visualize and interact with the virtual atmosphere generated by the computer. This atmosphere illustrates a 3D space that may be microscopic, macroscopic or imaginary based on the laws of imaginary dynamics and practical laws of dynamics. A real-world scenario can be generated and simulated dynamically because of efficient use of virtual environment, computer software and computer hardware. The virtual world can be programmed and designed to visualize various types of works like architectural builds, disaster conditions, accidental situations, military training simulations, flight simulations, etc. VR and simulation are strongly related and are used in military sector because computer simulation has been efficiently and effectively implemented in the military defense and aerospace technologies since the end of World War II. A virtual environment can be used for military firing training depicting real war like scenarios where the world and enemy targets are generated by CG (Computer Graphics). VR and simulation can also be used for training fighter jet pilots by training them in a fighter jet simulator where the pilot will also be able to experience the Gravityce which will be done through the use of rious hardware technologies. Popular game gines like Unity and Unreal Engine are used creating realistic scenarios whereas the 3D Niodels are generated by 3Ds Max, Maya and Blender technologies. Haptic Feedbacks are one 6ofthe factors that make VR and simulation more \%\%curate and realistic. AAR (Action After Review) is generated by a training system so that the soldiers can review their skills and the system can also suggest the areas where the soldiers should improve themselves by giving them prudent ideas for any war situation whether it is decision-making skill or emotional based decision. As the technologies are developing day-by-day, the accuracy and realism of these echnologies are also embracing and it will have an incredible future in the military context.

THERE ARE VARIOUS DIFFERENT TYPES OF VR AND SIMULATION TOOLS USED IN MILITARY TRAINING LIKE FLIGHT SIMULATORS, WAR-TANKS SIMULATORS, MARINE VESSELS SIMULATORS AND OTHER TACTICAL SIMULATORS. ALL THESE SIMULATORS ALLOW SOLDIERS TO LEARN HOW TO OPERATE VARIOUS MILITARY ARSENAL VEHICLES BY PROVIDING A REALISTIC EXPERIENCE IN A CONTROLLED ENVIRONMENT. IN THIS CONTROLLED ENVIRONMENT, SOLDIERS WILL NOT ONLY BE ABLE TO OPERATE MILITARY VEHICLES BUT ALSO LEARN HOW TO MAINTAIN THEM IN WAR SITUATIONS. IN NAVAL VESSEL SIMULATORS, SOLDIERS WILL BE ABLE TO KNOW THE FUNCTIONING OF THE VESSEL AND PRACTICE EXECUTING THE WEAPONS LIKE TORPEDO MISSILES IN THE VIRTUAL ENVIRONMENT WITHOUT CAUSING ANY THREAT TO ANY LIVING-BEING. THEY CAN ALSO TRAIN THEMSELVES FOR MAINTAINING THE ENGINE MOTORS OF THE NAVAL VESSEL IN THE CONTROLLED ENVIRONMENT. SIMULATION-BASED AND VR-BASED MILITARY TRAINING SCENARIOS ARE REALISTIC THAT CAN REPLICATE THE REAL BATTLEFIELD WITHOUT CAUSING ANY DAMAGE TO ANYONE'S LIFE AND PROPERTY. THESE TECHNOLOGIES HELP SOLDIERS TO EMBRACE THEIR TACTICAL AND COMBAT SKILLS TO BECOME A SIGNIFICANT SOLDIER IN THE BATTLEFIELD, REALIZING WHAT IMPACT THEY CAN have as a soldier on The other squad mates in the BATTLEFIELD AND HOW COOPERATIVELY THEY CAN WORK AS A TEAM TO OVERCOME ANY SITUATION. THESE TRAINING SYSTEMS ALSO PROVIDE A RECORDING FEATURE THAT RECORDS ALL THE MOTIONS OF EVERY SOLDIER, THEIR ACCURACY AND COORDINATION WITH OTHER SOLDIERS. IT ALSO GIVES PRUDENT IDEAS TO SOLDIERS TO OVERCOME ANY WAR SITUATION. A STORY SCENARIO IS GENERATED WITH MULTIPLE OUTCOMES THAT MIGHT OCCUR IN A REAL BATTLEFIELD AND SOLDIERS' DECISION-MAKING SKILLS AND EMOTIONAL TESTING CAN BE DONE THROUGH THE TRAINING SYSTEM.


Various body tracking sensors, HMDs, accuracy sensors, eyetracking sensors and 3D-printed guns are used for a more
 realistic experience which tracks analytics of every soldier. Simulators like tank simulator, flight simulator, helicopter simulator, naval simulators and many more arsenal simulators are not only used to train the soldier on how to operate it but also train them how to maintain them in a battlefield. Various companies are working on improving the resolution and field of view of VR headsets and more usage of haptic feedbacks to increase the sense of presence (SoP). In the current situation, the haptics of VR simulation are often quite limited and the joysticks are of fixed-shape controllers. The haptic feedback is provided by some simple vibrations generated by a motor. Besides sensors and haptics, FEELREAL sensory mask can simulate more than 200 different scents for a user to smell in VR. ThermAirGlove which provides thermal feedback while interacting with virtual objects. This type of training allows for repeated training sessions without any risk of injury and is not only safer but also more cost-effective than live-fire exercises. These simulation systems also have many limitations like expertise, technical support, user acceptance, accuracy, etc. Despite these limitations, VR and simulation technologies remain a critical and more advanced way of military training and defense technology. As the technology is advancing day-by-day, it is likely that these technologies will overcome the current limitations and become even more sophisticated and effective in the military context. Overall, the benefits of VR and simulation technologies in military training are more and these technologies are able revolutionize the way soldiers are trained for real-war sc

## NEURALINK: THE FUTURE OF BRAIN MACHINE INTERFACES

NEURALINK: IS A NEUROTECHNOLOGICAL COMPANY WHICH WAS FOUNDED BY ELON MUSK IN 2016. IT IS FOCUSED ON DEVELOPING BRAIN-MACHINE INTERFACES (BMIS) THAT DIRECTLY CONNECT THE HUMAN BRAIN WITH THE COMPUTER OR ANY OTHER DIGITAL DEVICE.
THE ULTIMATE GOAL OF NEURALINK IS TO HELP HUMANS BY MERGING HUMANS WITH ARTIFICIAL INTELLIGENCE TO REHABILITATE HUMAN COGNITIVE ABILITIES AND TO SOLVE NEUROLOGICAL PROBLEMS.

## WHAT ARE BMIS? HOW DOES IT WORK?

bMIS STANDS FOR BRAIN-MACHINE INTERFACE WHICH IS A NEUROTRANSMITTER DEVICE THAT ALLOWS DIRECT COMMUNICATION between the brain and external devices such as prosthetic LIMBS, COMPUTERS ETC. IT IS OF TWO TYPES, INVASIVE \& NONINVASIVE. IT INVOLVES THE INSERTION OF ELECTRODES DIRECTLY INTO THE BRAIN TISSUE OR IT CAN USE EXTERNAL SENSORS TO detect signals from the scalp or other parts of the body and RECORD THE ELECTRICAL SIGNALS OF THE BRAIN. RECORDED SIGNALS CAN BE DECODED BY A SPECIALIZED COMPUTER CHIP AND THEN TRANSLATED INTO DIGITAL COMMANDS THAT CAN BE USED TO CONTROL COMPUTERS, PROSTHETIC LIMBS, OR OTHER DEVICES. FOR EXAMPLE, A PERSON WITH A NEURAL IMPLANT COULD USE THEIR THOUGHTS TO MOVE A COMPUTER CURSOR, PLAY A VIDEO GAME, OR
 CONTROL A ROBOTIC ARM.

## THE ImPaRTANCE ロF RLGロRITHmS ANロ SロFTURRE IN NEபRALINK＇S 日RFIN－mACHINE INTERFFCES

NEURALINK DEVELOPS ALGORITHMS AND SOFTWARES THAT CAN BE USED TO INTERPRET THE DATA COLLECTED BY THE ELECTRODES AND TRANSLATED INTO USEFUL INFORMATION． THIS INVOLVES GENERATING ALGORITHMS WHICH HELPS TO BUILD COMMUNICATION BETWEEN BRAIN AND COMPUTER BY DECODING THE BRAIN ACTIVITY．THE PROCESSOR WHICH MAKES ALL OF THIS WORK IS SOMETHING CALLED THE N1 CHIP．IT CAN BE USED TO TREAT A RANGE OF NEUROLOGICAL DISORDERS，FROM PARKINSON＇S DISEASE TO EPILEPSY，AND ENABLE PEOPLE WITH DISABILITIES TO REGAIN MOBILITY AND INDEPENDENCE．

## FUTURE GF NEURALINK

IN FUTURE，IT MIGHT INCLUDE A NEW KIND OF COMMUNICATION LIKE TELEPATHY OR DOWNLOADING THE MEMORIES．THE TECHNOLOGY CONTINUES TO EVOLVE AND IMPROVE，IT IS LIKELY TO HAVE A SIGNIFICANT IMPACT ON OUR LIVES AND THE WAY WE INTERACT WITH THE WORLD AROUND US．THE POSSIBILITY ARE ENDLESS BUT OF COURSE，THESE ARE THE VERY EARLY DAYS AND WE HARDLY UNDERSTAND ANYTHING ABOUT THE BRAIN．

## AN EPIC TRANSITION OF EDUCATIONAL YORE.

...BUT THE ONE WHO ENDURES TO THE END WILL BE SAVED.

~MATTHEW 24:13

THE WORD "ENDURE" IS INDEED A POWERFUL
WORD. ISN'T IT? ENDURE MEANS TO SUFFER
SOMETHING PAINFUL OR UNCOMFORTABLE, USUALLY WITHOUT COMPLAINING. WOW! SUFFERING
SOMETHING "PAINFUL OR UNCOMFORTABLE"
REMINDS ME A LOT OF MARCH 2020 WHERE WE KEPT ON HEARING OUR NEIGHBORS, RELATIVES, AND FRIENDS COUNTING THEIR LAST BREATHS IN THE ICU OF HOSPITALS WAS BEYOND PAINFUL, AND WEARING MASKS, GLOVES, HAZMAT SUITS EVERYWHERE YOU GO NO MATTER IF THEY WERE YOUR SIBLINGS OR EVEN YOUR OWN PARENTS WAS UNCOMFORTABLE. EVERY MORNING WAS FRIGHTENING BECAUSE NO ONE KNEW WHAT WOULD HAPPEN NEXT AND WHO WOULD BE AFFECTED. PARENTS WERE ANXIOUS ABOUT THEIR CHILDREN. NO DOUBT THEY WERE MORE ANXIOUS ABOUT THEIR CHILDREN'S
EDUCATION. WORKING PARENTS WERE EXTREMELY STRESSED SINCE SENDING THEIR KIDS TO SCHOOL USED TO HELP THEM TO CONCENTRATE ON THEIR OWN HECTIC WORK LIFE.
PARENTS ALTOGETHER WERE WORRIED ENOUGH TO NOT KEEP THEIR KIDS AWAY FROM THEM BUT AT THE SAME TIME WERE VERY MUCH ANNOYED TOO, ON THE OTHER HAND, STUDENTS WERE USED TO OR WE CAN SAY AS THEY WERE COMFORTABLE IN THE ONLY WAY" THE TRADITIONAL WAY" TO STUDY, WHERE THEY WERE PRESENT PHYSICALLY ON THOSE DESKS AND WERE ACTIVELY ASKING DOUBTS, SURROUNDED WITH THEIR FRIENDS WHO TOO WERE ON THE SAME BOAT TOGETHER

OFFLINE MODE WAS COMFORTABLE BUT USED TO BE CHALLENGING FOR STUDENTS TO CONFRONT THEIR LAZY LIFESTYLE AND TO COME OUT OF THEIR COMFORT ZONES, TO CONFRONT THEIR INSECURITIES AND WRONG BELIEF SYSTEMS THAT THEY WERE ROOTED IN BECAUSE THEY WERE CONSTANTLY EXPOSED TO EXPERIENCED AND KIND TEACHERSIPROFESSORS WHO GUIDE THEM IN THE CURRICULUM ALSO IN EXTRACURRICULAR ACTIVITIES. HERE IN THIS LOCKDOWN MODE, SOMETHING STRANGE BUT ONLY POSSIBLE MODE OF EDUCATION WAS INTRODUCED IN INDIA, AN "ONLINE MODE". FROM THE PHYSICAL CLASSROOM TO GOOGLE CLASSROOM. FROM THE BLACKBOARD TO THE DIGITAL WHITEBOARD, FROM RAISING DOUBTFUL PHYSICAL HANDS TO CLICKING BUTTONS TO RAISE HANDS WAS VERY STRANGE BUT again challenging. Since there was minimal HUMAN-TO-HUMAN INTERACTION, ISOLATION STARTED CRIPPLING THE LIVES OF MANY yOUNG STUDENTS, MESSING WITH THEIR MINDS AND MAKING THEM MORE SOCIALLY SELF-CENTERED IN NATURE AND ULTIMATELY ALL OF THESE RUINED THE MENTAL STATE OF ALL STUDENTS

SOME STUDENTS HAD GOOD FACILITIES BUT YET COULDN'T FIGURE OUT THE MEANING OF "ENDURANCE", TO UNDERSTAND LET US SEE WHAT RESEARCH SAYS, *AMONG THE VICTIMS, 79\% ( $N=33$ ) WERE BETWEEN 14 YEARS
AND 18 YEARS OF AGE, $14 \%(N=6)$ BETWEEN 11 YEARS AND 13 YEARS, AND 7\%
( $N=3$ ) BETWEEN 19 YEARS AND 20 YEARS. OVERALL, $57 \%(N=$ 24) OF VICTIMS WERE FEMALES AND $43 \%(N=18)$ WERE MALES. THE VICTIMS WERE FROM BOTH URBAN (52\%, N = 22) AND RURAL ( $48 \%, N=20$ ) AREAS. THESE CASES WERE REPORTED ACROSS 14 STATES, WITH THE MAXIMUM NUMBER BEING FROM TAMIL NADU (31\%, N = 13). THE MOST FREQUENTLY REPORTED THEME ( $45 \%, N=19$ ) WAS THE INABILITY TO ACCESS ONLINE EDUCATION BECAUSE OF THE UNAVAILABILITY OF SMARTPHONES OR INTERNET FACILITIES THE SECOND MOST FREQUENTLY REPORTED THEME $136 \%, N=$ 15) WAS THE INABILITY OF THE STUDENTS TO COPE WITH ONLINE EDUCATION. WHEREIN THEY HAD EXPRESSED THEIR DIFFICULTY IN LEARNING THROUGH THE ONLINE CLASSROOM and the stress associated with it. a large majority ( $71.4 \%, N=30$ ) HAD USED HANGING AS THE METHOD OF SUICIDE."

WHILE READING THIS RESEARCH PAPER, I WAS SHAKEN WITHIN AND COULDN'T UNDERSTAND, HOW? A PERSON CAN SUFFER SOMETHING PAINFUL AND UNCOMFORTABLE WITHOUT EVEN COMPLAINING. WHO IS RESPONSIBLE FOR THE DEATH OF SO MANY INNOCENT STUDENTS? ME? GOVERNMENT? SOCIETY? PARENTS? ONLINE MODE? OR THE PANDEMIC THE COVID-19 VIRUS ITSELF? WELL, THE ANSWER TO THIS WAS VERY DIFFICULT TO FIND AND SOMEHOW I SAW THIS VERSE OF MATTHEW 24:I3 THAT SAYS " ONE WHO ENDURES TO THE END WILL BE SAVED

SAVED FROM ALL THE TREMENDOUS, HEARTBREAKING CHANGING, UNBEARABLE, COMPLICATED, AND DIFFICULT TIMES THROWN BY LIFE ONTO EVERY HUMAN ON THIS PLANET. NO MATTER HOW BIG OR SMALL THAT PROBLEM MIGHT BE WHETHER IT BE JUST AS SMALL AS TO ADAPT AN EDUCATIONAL CHANGE FROM OFFLINE TO ONLINE. SOME WHO DIDN'T POSSESS THIS ENDURANCE ABILITY PERISHED

TODAY, WE ARE FREE FROM THE DEADLY PANDEMIC AND WE AS STUDENTS SAW A LOT THROUGHOUT THIS JOURNEY OF OFFLINE ONLINE - OFFLINE, WE ARE BACK TO NORMAL DOING mundane thing of college life but I believe that PEOPLE WHO KNEW HOW TO SURVIVE IN ALL SCENARIOS OF LIFE MADE IT TO THE YEAR 2022. WE DEFINITELY BECOME STRONG AND ARE CHANGED. FOR THIS TRANSITION IN LIFE WE BLAME THE PANDEMIC BUT FROM MY PERSPECTIVE, IT IS A GREAT TEACHING FOR ME TO LEARN HOW TO ENDURE AND ADAPT. NO MATTER IF A PANDEMIC HITS HARD AGAIN EVEN IF IT HITS HARDER THAN IT HAD EVER BEFORE, I AM NOT SCARED OR WILL NOT BE SCARED BECAUSE I KNOW THAT I CAN ENDURE, AND ENDURE TILL THE END UNTIL I AM SAVED

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## 5G NETWORK： UNLaCKING THE FUTURE aF CGNNECTIUITY

BRINGING A NEW ERA IN TECHNOLOGY，PRIME MINISTER NARENDRA MODI
LAUNCHED THE 5G TELECOM SERVICES IN INDIA ON 1ST OCTOBER 2O22．THE NEW 5G TECHNOLOGY WILL PROVIDE BETTER COVERAGE，HIGHER DATA SPEEDS， LOWER LATENCY AND MORE RELIABLE COMMUNICATION SYSTEM．

SO WHAT IS 5G NETWORK？WHO DEVELOPED IT？
THE FIFTH－GENERATION WIRELESS NETWORK，COMMONLY KNOWN AS 5G，IS THE LATEST DEVELOPMENT IN CELLULAR TECHNOLOGY．
THE DEVELOPMENT OF 5G IS THE RESULT OF THE COLLECTIVE EFFORTS OF
NUMEROUS ENGINEERS，RESEARCHERS，AND ORGANIZATIONS AROUND THE WORLD．HOWEVER，SOME NOTABLE CONTRIBUTIONS WERE MADE BY COMPANIES SUCH AS QUALCOMM，HUAWEI，NOKIA，ERICSSON，AND SAMSUNG，AS WELL AS ACADEMIC AND RESEARCH INSTITUTIONS SUCH AS IIT MADRAS，IIT HYDERABAD， TSDSI．

WHAT UNDERLYING TECHNOLOGIES MAKE UP 5G？
5G IS BASED ON OFDM（ORTHOGONAL FREQUENCY－DIVISION MULTIPLEXING），A METHOD OF MODULATING A DIGITAL SIGNAL ACROSS SEVERAL DIFFERENT CHANNELS TO REDUCE INTERFERENCE．5G USES THE 5G NR AIR INTERFACE ALONGSIDE OFDM PRINCIPLES．5G ALSO USES WIDER BANDWIDTH TECHNOLOGIES SUCH AS SUB－6 GHZ AND MMWAVE．

5G IS FASTER THAN 4G.
5G DOWNLOAD SPEEDS CAN CURRENTLY REACH UPWARDS OF 1,000 MEGABITS PER SECOND (MBPS) OR EVEN UP TO 2.1 GBPS.

5G USES SPECTRUM BETTER THAN 4G.
5G IS ALSO DESIGNED TO GET THE MOST OUT OF EVERY BIT OF SPECTRUM ACROSS A WIDE ARRAY OF AVAILABLE SPECTRUM REGULATORY PARADIGMS AND BANDS-FROM LOW BANDS BELOW 1 GHZ , TO MID BANDS FROM 1 GHZ TO 6 GHZ , TO HIGH BANDS KNOWN AS MILLIMETER WAVE (MMWAVE).

5G HAS LOWER LATENCY THAN 4G.
LATENCY REFERS TO THE TIME IT TAKES FOR DATA TO TRAVEL FROM ONE POINT TO ANOTHER, AND IT IS MEASURED IN MILLISECONDS. 5G NETWORKS CAN ACHIEVE LATENCY AS LOW AS 1 MILLISECOND, WHICH IS ALMOST INSTANTANEOUS.

- 5G TECHNOLOGY WILL PROVIDE SEAMLESS COVERAGE IN REMOTE AREAS ACROSS THE COUNTRY. IT WILL INCREASE ENERGY EFFICIENCY, SPECTRUM EFFICIENCY AND NETWORK EFFICIENCY.
- 5G WILL ALSO ENABLE NEW SERVICES AND PRODUCTS POWERED BY INTERNET OF THINGS (IOT) TECHNOLOGIES. THE ADVANCED ABILITIES OFFERED BY 5G NETWORKS WILL ALSO DRIVE NEW BUSINESS MODELS.
- 5G HAS THE POTENTIAL TO REVOLUTIONIZE HEALTHCARE BY ENABLING REMOTE MONITORING OF PATIENTS, REAL-TIME TRACKING OF MEDICAL EQUIPMENT, AND REMOTE

SURGERY. IT COULD ALSO IMPROVE ACCESS TO HEALTHCARE IN RURAL AREAS.

- 5G WILL ENABLE CUSTOMERS TO WATCH 4K VIDEO ON THEIR PHONES. IT WILL ALSO ENABLE THE USE OF AR/VR, MOBILE GAMING APPS, AND A NUMBER OF OTHER IMMERSIVE ACTIVITIES AND NEW APPLICATIONS.
IN CONCLUSION, 5G NETWORK TECHNOLOGY IS A MAJOR LEAP FORWARD IN THE WORLD OF WIRELESS CONNECTIVITY. WITH ITS FASTER SPEEDS, REDUCED LATENCY, INCREASED CAPACITY, IMPROVED ENERGY EFFICIENCY, 5G HAS THE POTENTIAL TO REVOLUTIONIZE THE WAY WE COMMUNICATE, WORK, AND LIVE. IT WILL ENABLE NEW APPLICATIONS AND USE CASES, SUCH AS AUTONOMOUS VEHICLES, REMOTE SURGERY, AND REAL-TIME MONITORING OF PATIENTS, THAT WERE NOT POSSIBLE WITH PREVIOUS GENERATIONS OF WIRELESS TECHNOLOGY. WHILE THE FULL POTENTIAL OF 5G IS YET TO BE REALIZED.

SO WHY DOES AI IN HEALTHCARE MATTER?WHAT IS IT EXACTLY? HEALTHCARE IS THE MOST CRITICAL SECTOR IN THE BROADER LANDSCAPE OF BIG DATA BECAUSE OF ITS VITAL ROLE IN A PRODUCTIVE, THRIVING SOCIETY.

THE INTEGRATION OF AI WITH HEALTHCARE CAN REVOLUTIONIZE THE MATTERS OF LIFE AND DEATH.
SO DOES IT MEAN AI IS GOING TO TAKE OVER THE ROLES OF HEALTH PROFESSIONALS LIKE DOCTORS AND NURSES? ABSOLUTELY NOT! AI CAN ASSIST THESE HEALTH PROFESSIONALS IN THEIR DAILY WORK, FOR EXAMPLE:
"NITI AYOG", A PUBLIC TANK, POLICY AND PROGRAM FRAMEWORK FOR THE INDIAN GOVERNMENT HAS BEEN TESTING THE APPLICATION AND IMPLEMENTATION OF AI IN THE EARLY DETECTION OF DIABETES AND IS CURRENTLY WORKING ON THE USE OF AI AS A SCREENING TOOL IN EYECARE

## CHALLENGES WHILE INTEGRATING AI INTO HEALTHCARE

THE HEALTHCARE INDUSTRY MUST REALIZE THAT IMPLEMENTATION OF AI IS NOT THE END. IT MAY LEAD TO COMPROMISING THE ABILITY OF PHYSICIANS TO ACCURATELY DETECT MISTAKES IN ANY STAGE OF AI INTEGRATION AND LEAD TO OVER-DEPENDENCE ON AN AI BASED TOOL. IN FACT, I FEEL AI SHOULD ASSIST IN DECISION MAKING AND NOT BE USED IN AUTOMATED DECISION MAKING. I FEEL AI TOOLS SHOULD NEVER BE REPLACED WITH PRIMARY HEALTHCARE BUT THEIR POTENTIAL CAN BE USED TO THE FULLEST BY PROVIDING ADVANCED INFRASTRUCTURE AND FACILITIES IN URBAN AND RURAL HEALTHCARE ORGANIZATIONS!

## CONCLUSION:

INDIA'S ACCEPTANCE OF AI INTO HEALTHCARE CAN EMPOWER IT TO AMALGAMATE THE IMBALANCE BETWEEN THE INCREASING RURAL POPULATION AND LACK OF BASIC HEALTHCARE INFRASTRUCTURE. INDIA CAN BECOME THE

FRONT RUNNER AMONG EMERGING MARKETS AND CAN MEET ITS FEASIBLE

# DESTENED BY:- 

MOHAMMED NAVED AZEEZ ANISHA GOYAL

# GRAMMAR :- 

MEGHA CHAWLA<br>YOSHITA AHUJA

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