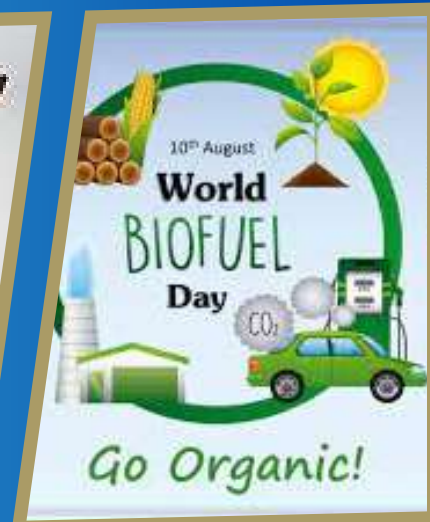
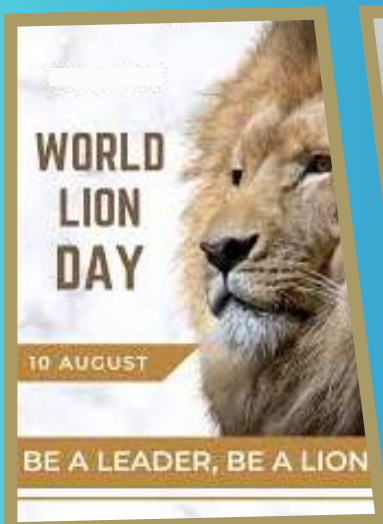


QUEST

AUGUST
EDITION
2024



*"Millions saw the apple fall,
BUT NEWTON ASKED WHY."*

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FROM THE EDITOR'S DESK



DR. MANPREET KAUR



MRS. PRABHJOT KAUR

All the students of classes P4 - SS2 are encouraged to bring forth their scientific temperament in any representation of writing, videos, photography or art forms. Share your work at <https://forms.office.com/Pages/ResponsePage.aspx?id=uWYNCSglt0-C41wF7EuWrnlKIO74p5NAI8uEWvqNRwVUQTLYWEFZUEI2RklnUVVRMkg1OExJWk5PTi4u>

AI AND HUMAN CREATIVITY: COMPANIONS OR COMPETITORS?

G.B.S. HOT NEWS



The intersection of artificial intelligence (AI) and human creativity presents one of the most intriguing discussions in technology. Creativity has been seen as a human trait. However, the rise of AI technologies that can generate many forms of creative outputs have prompted a reevaluation of this notion. The debate surrounding AI's role in creativity often revolves around viewing AI as a companion to human creativity or as a competitor, potentially displacing traditional creative roles.

AI as a Companion to Human Creativity

AI is a powerful tool that can enhance human creativity rather than replace it. AI algorithms are capable of analyzing vast amounts of data, identifying patterns, and generating outputs that might not be immediately apparent to human creators. These systems can offer new perspectives that human artists might not have considered.

Musical AI tools have abilities to compose original pieces across various genres by learning from extensive datasets of musical compositions. They can serve musicians as a collaborative partner in the creative process. Similarly, AI-generated works can inspire artists by presenting choices and blending styles in innovative ways.

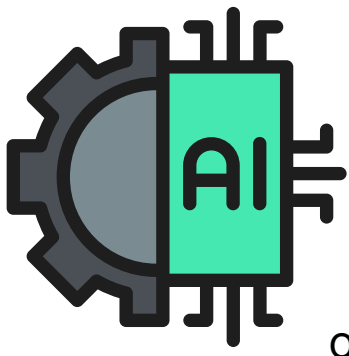
Moreover, AI can make advanced tools accessible to those who might lack formal training. Platforms using AI to assist in creative works allow more people to engage in creative activities. This democratization leads to broaden the scope of what is considered art.

AI as a Competitor to Human Creativity

On the other hand, AI's ability to produce creative works raises questions about the nature of creativity and the role of human artists. Critics argue that AI-generated content, while technically impressive, lacks the depth of human experience and emotional resonance. Creativity, in its most profound sense, is often tied to the artist's unique perspective, emotions, and life experiences—elements that AI, regardless of its sophistication, cannot authentically replicate. AI in creative fields raises concerns about the economic impact on human creators. As AI becomes more adept at generating high-quality content, there is a risk that it could undermine the livelihoods of artists, writers, and musicians. AI-generated content might reduce costs of businesses, potentially leading to a reduction in opportunities for human creators. Originality is also challenged by AI's ability to produce work based on existing data. While AI can create impressive imitations, some argue that true originality requires a human touch. As AI systems generate content based on patterns and algorithms, there is a concern that they may not foster genuine innovation.

Conclusion

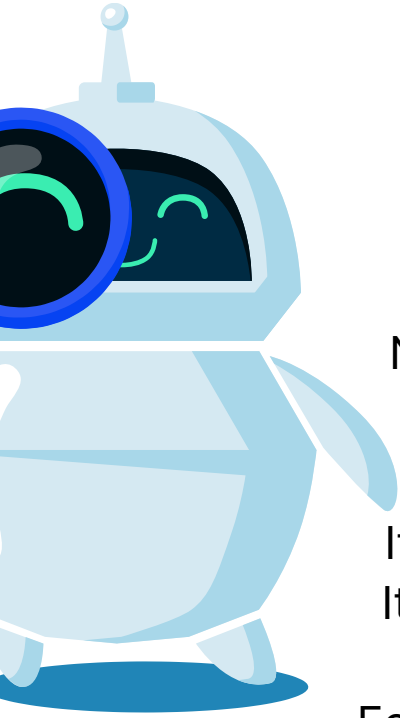
The relationship between AI and human creativity is complex. While AI has the potential to act as both a companion and a competitor, its impact may enhance and expand human creative endeavors. By embracing AI as a tool for collaboration, rather than as a threat to creative roles, we can harness its capabilities and foster a more inclusive and diverse artistic environment. In this way, AI and human creativity can coexist and thrive together, each contributing uniquely to the various human expressions.



The Harmony of AI



In labyrinths of logic, AI hums, In a silent orchestra, the signals drum,
From tangled codes, a harmony unfolds, From tripping over circuits to songs untold

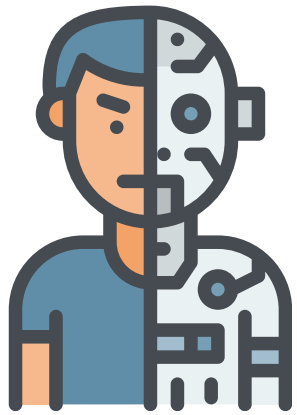


The digital composer called AI
Crafts intricate patterns in the night.
No hands to write and no voice to sing
But from it's data, melodies spring



It learns from art and literature's grace,
It learns from works of the human race.
It creates using it's algorithmic keen,
Forming masterpieces you've never seen.

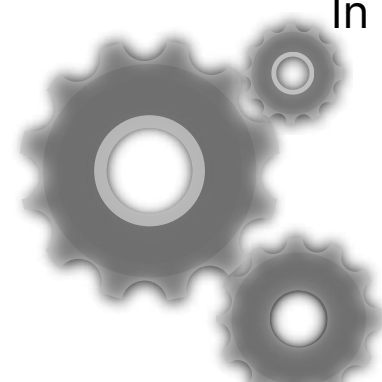
Though it weaves its magic with precision,
It lacks the warmth of human intuition.
Yet still it stands as partner to our quest,
A mirror to our vision, a mirror at its best



In harmony, let's craft a future fair,
Where human hearts and AI's gifts can share.
Together we weave a tale of flight,
In the symphony of stars and circuits bright.

WRITTEN BY:

-Reneeka Mohapatra M3-A



APPLICATIONS OF SCIENCE IN DAILY LIFE

We use science in every thing we do. Things ranging to basic things such as breathing and eating food to solving complex problems is an application of science. We know basic things by common sense. But you have ever thought of them in the scientific way? Let's see then, what we all know about science. This article will follow a quiz to be answered based on the article and a little more than that. Please attempt it. Your response would be appreciated and the one who scores the highest the first would get recognition in the next month's quest with his/her photo and name. Valid till 31/8/24 11:59PM

Applications: -

1. One might have had noticed that when in a dark room a small beam of light enters, we can see several dust particles flying freely in the room. This is due to the scattering of light by the dust particles. This is called the Tyndall effect. It was discovered by Mr. John Tyndall. It is showed by colloids and suspensions, which are the two types of mixtures. A mixture is any substance which is made up of two or more type of particles.



2. Athletes wear grooved shoes. Many people might have noticed that. But a lot of people don't know why. This is because of the phenomenon known as friction. It is also called a 'necessary evil'. It is the force exerted by any surface on another surface by opposing its motion. Friction has three types which in decreasing order is: Static Friction, Sliding Friction, Rolling Friction. This gives the athletes wearing the grooved shoe an extra grip on the ground.

3. We need transportation. We cannot go anywhere without transportation. But how do our vehicles move. They move by the conversion of energy. We know that all the fuel that we burn releases energy. The energy stored in the fuel we burn is called chemical energy. It is converted to mechanical energy required for the movement of vehicle. Also, energy can neither be created, nor be destroyed.



4. The most common in our body when we get a cold is to cough, sneeze and sometimes have hiccups. Though these are very common, they occur due to a reason. It is that something happens to be irritating our respiratory tract at that time. When something irritates our trachea or windpipe, we cough. When something irritates our lungs, we sneeze. When something irritates our diaphragm, we have hiccups.

Please [click here](#) to open the quiz. All the best

Made by : - Aarav Gupta S1-E

GAGANYAAN

BY: ARUNAV PRASHANT, M3B

WHAT IS GAGANYAAN?

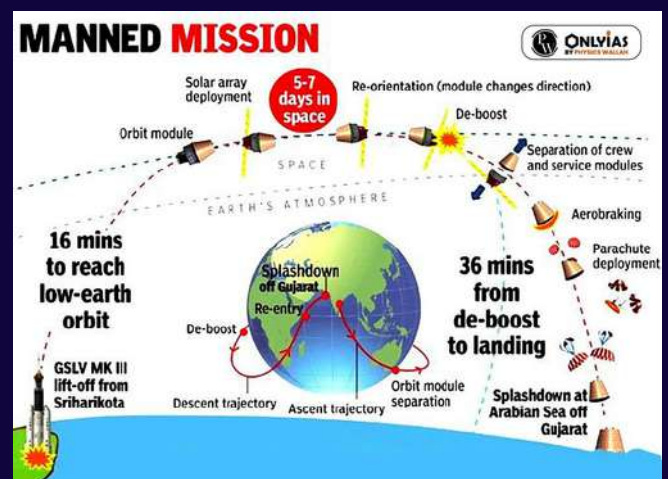
To undertake human space flights: Its immediate aim is to demonstrate indigenous capability to undertake human space flights.



Space exploration: In the long run, it will lay the foundation for a sustained Indian human space exploration programme. It is a man mission carrying 4 people in the space by HLVM3 rocket. It is expected to launch by 2025.

ROUTE OF GAGANYAAN

Route of Gaganyaan is that when rocket will launch it will separate into capsule and stay in space for 5-7 days and come back to Earth.



contd.

GAGANYAAN INNER PART

Gaganyaan crew module is a fully autonomous 5.3 t (12,000) spacecraft designed to carry 3 member crew to orbit and safely return to the earth after the mission.



ASTRONAUTS FOR GAGANYAAN MISSION



Prasanth Balakrishnan Nair, Ajit Krishnan and Angad Pratap, and wing commander Shubanshu Shukla are elected for Gaganyaan mission.

DR. CHIMPAMCHIMPOPLI AND HIS TALES OF MULTIVERSE

Anay Shreenivas Gundlapudi - M1 C

Aryan couldn't sleep for a long time, so his grandfather began telling him one of his favorite stories of all times, "The Tales of the Multiverse." As Aryan rested his head on his grandfather's shoulder, he started "Dr. Chimpamchimpopli was a very famous scientist on his home planet, Kallos-43. He had discovered a secret formula for immortality, which he never shared with anyone. He had lived for over 300 years and was an incredibly experienced scientist. For the past 50 years, he had been working on a spaceship project, and today, it was finally completed. Dr Chimpamchimpopli was ecstatic and wanted to shout out in joy. His spaceship could travel at a speed of 60,000 kilometers per second.

Dr. Chimpamchimpopli was ready to leave his planet. He bid farewell to his friends and family and embarked on a journey to discover something new.

As he wandered through space, admiring the beauty of the universe, something strange happened. The spaceship started moving in reverse. When Dr. Chimpamchimpopli looked out of the window, he saw a black hole! He was dangerously close to it. Fear gripped him as the black hole swallowed both him and his spaceship in an instant.

He lost consciousness, and when he woke up, he found himself drifting in space. He thought he had just experienced a bad dream. But as he started observing the surroundings again, he noticed something strange: the planets around him were not round but square in shape. He wondered how this was possible, and suddenly, he realized the answer to all his questions. The black hole had teleported him to a parallel universe."



Dr. Chimpamchimpopli wanted to return to his own universe, but he couldn't remember which black hole had brought him here. In need of fuel, he landed on a planet and discovered tons of uranium, enough to power his spaceship for up to 15 years. He set off on a journey, venturing through black holes in search of his own universe.

Along the way, he encountered many different universes: some filled entirely with water, others devoid of planets, some inhabited by gigantic demons, and others where planets were made of gold and diamonds. He saw universes with green and pink stars and many more extraordinary sights. His favorite was the Marvel Universe, where superheroes like Iron Man, Thor, Spider-Man, and many others existed.

Dr. Chimpamchimpopli wandered through space for centuries, unable to find his own universe. But one day, he arrived in a universe filled with black holes. There, he could see all the parallel universes at once on a massive screen. After searching through millions, billions, trillions, and even quintillions of universes, he finally found his own.

contd.

When Dr. Chimpamchimpli finally returned to his planet, 2,000 years had passed, and a new, advanced civilization was now thriving there. He shared with them his incredible journey through the multiverse and the secrets of traveling to parallel universes.

The people of this new civilization had developed a time machine, so Dr. Chimpamchimpli requested to use it to return to his own time, 2,000 years in the past. They agreed, on the condition that he would give them his spaceship. Dr. Chimpamchimpli accepted the offer. With the help of the time machine, Dr. Chimpamchimpli returned to his original time and universe, where he lived happily ever after.

Aryan had fallen off to sleep and was probably dreaming about his own spaceship. Grandpa tucked him tight and kissed him good night.



THE END





As the world struggles and grapples with the challenges of climate change, energy security, and sustainable development, renewable energy has emerged as a beacon of hope. In the recent years, some very remarkable advancements in technology and significant reductions in costs have made renewable energy a viable alternative to fossil fuels. Renewable energy is basically energy derived from natural sources that are replenished at a higher rate than they are consumed.

Solar Energy: Shining Bright

Solar energy, in particular, has made tremendous strides. Solar energy can also be classified as one of the most consumed renewable resources. Solar energy includes - Bifacial panels, which can harness energy from both sides, have increased efficiency by up to 25%. Categorising more in solar energy- Perovskite solar cells, a new type of photovoltaic material, have shown promising results with higher power conversion efficiency rates. Additionally, innovations in solar power storage have addressed intermittency concerns, enabling a more reliable energy supply.

Wind Energy: Blowing Strong

Wind energy has also seen significant improvements. Wind energy is also largely used given a renewable resource. Larger turbines with advanced blade designs have increased energy production while reducing costs. Floating wind farms have opened up new possibilities for offshore wind energy, unlocking vast resources. Moreover, wind-solar hybrids have emerged as a promising solution for a stable and efficient energy mix.

contd.

Hydro and Geothermal Energy: Reliable and Constant

Hydro means water, thus, the energy produced by water is known as Hydro energy. Geothermal energy means energy derived from the surface of the earth. Getting back to water energy, Hydro energy though mature, continues to innovate. Tidal power and wave energy converters tap into the predictable and reliable energy of ocean tides and waves. Geothermal energy, leveraging heat from the Earth's core, has seen advancements in Enhanced Geothermal Systems (EGS), enabling expansion into new regions. Hence, apart from Wind and solar energy we have Hydro and geothermal as our winning two!

A Brighter Future

Renewable in itself means replenish or renewed, but proper care should be undertaken for these energy as well, Renewable energy helps us to shape a brighter future- not only for us but also for the upcoming generations yet to come, Governments worldwide have set ambitious targets, and companies are investing heavily in clean energy. As costs continue to decline and efficiency increases, renewable energy is poised to become the dominant source of power globally. Renewable energy has reached an inflection point, and its future looks brighter than ever. As we continue to innovate and push boundaries, we can create a sustainable, equitable, and environmentally conscious energy landscape. Embracing renewable energy is not just a choice; it's a necessity for a livable future.



By- Riddhima Kewalya, M3A



GENETICS



HOW DO GENETICS WORK?



WORKING OF GENETICS

PARENTS PASS ON TRAITS OR CHARACTERISTICS, SUCH AS EYE COLOUR AND BLOOD TYPE, TO THEIR CHILDREN THROUGH THEIR GENES. SOME HEALTH CONDITIONS AND DISEASES CAN BE PASSED ON GENETICALLY TOO. SOMETIMES, ONE CHARACTERISTIC HAS MANY DIFFERENT FORMS. FOR EXAMPLE, BLOOD TYPE CAN BE A, B, AB OR O.

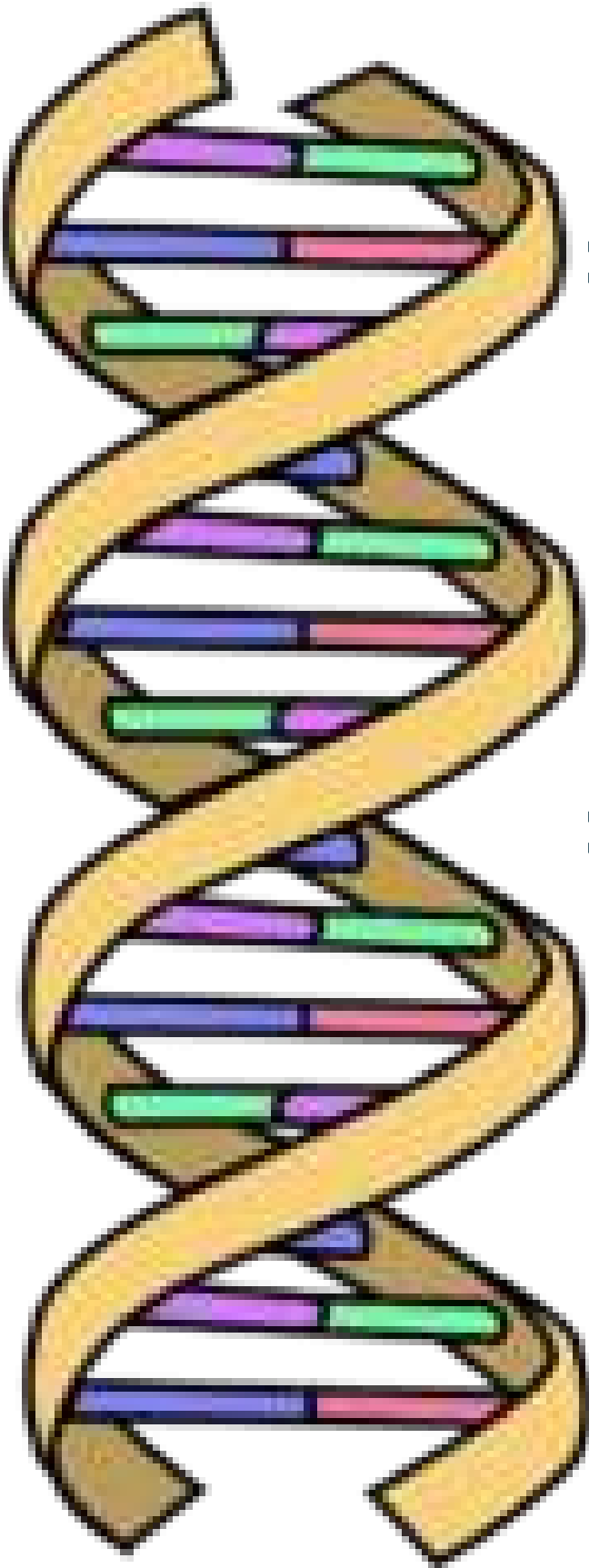
EPIGENETICS IS THE STUDY OF HERITABLE TRAITS, OR A STABLE CHANGE OF CELL FUNCTION, THAT HAPPEN WITHOUT CHANGES TO THE DNA SEQUENCE. THE GREEK PREFIX EPI- IN EPIGENETICS IMPLIES FEATURES THAT IS "ON TOP OF" OR "IN ADDITION TO" THE TRADITIONAL GENETIC MECHANISM OF INHERITANCE.



WHAT IS EPIGENETICS

contd.

D.N.A



DNA

>>> WHAT IS DNA?

DEOXYRIBONUCLEIC ACID (ABBREVIATED DNA) IS THE MOLECULE THAT CARRIES GENETIC INFORMATION FOR THE DEVELOPMENT AND FUNCTIONING OF AN ORGANISM. DNA IS MADE OF TWO LINKED STRANDS THAT WIND AROUND EACH OTHER TO RESEMBLE A TWISTED LADDER — A SHAPE KNOWN AS A DOUBLE HELIX.

>>> WORKING OF DNA

EACH MOLECULE OF DNA IS A DOUBLE HELIX FORMED FROM TWO COMPLEMENTARY STRANDS OF NUCLEOTIDES HELD TOGETHER BY HYDROGEN BONDS BETWEEN G-C AND A-T BASE PAIRS.

DUPLICATION OF THE GENETIC INFORMATION OCCURS BY THE USE OF ONE DNA STRAND AS A TEMPLATE FOR FORMATION OF A COMPLEMENTARY STRAND.

PRAVEER SINGH RAJPUT
CLASS- M3A

Science Frontiers

Welcome to our exploration of cutting-edge science, where we delve into the mysteries of DNA, the world of viruses, and other fascinating discoveries shaping our understanding of the natural world.



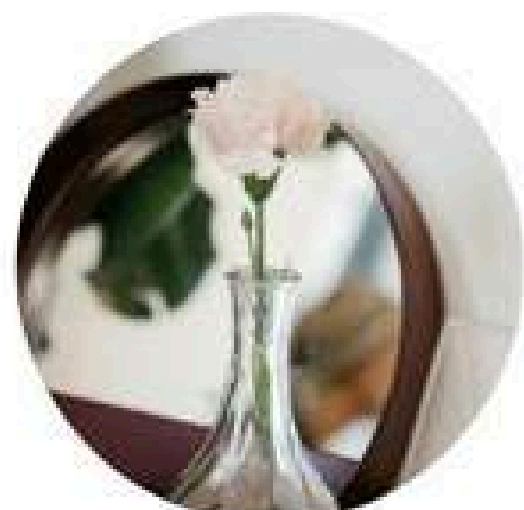
DNA Editing

CRISPR-Cas9 technology allows scientists to precisely edit DNA sequences, opening up possibilities for treating genetic diseases and de...



Viral Evolution

Viruses constantly evolve, adapting to new environments and hosts, making it crucial to understand their mechanisms for develo...



Artificial Life

Scientists are exploring the creation of artificial life forms, from synthetic cells to self-replicating molecules, pushing the boundaries of biology.

contd.



Brain Mapping

Advanced neuroimaging techniques allow researchers to map the human brain in unprecedented detail, providing insights into its functions and disorders.



Climate Change

Scientists are studying the impacts of climate change on our planet, from rising sea levels to extreme weather events, and seeking solutions to mitigate its effects.



Scientific Advancements

From the depths of our genes to the vastness of space, science continues to unveil wonders and challenge our understanding of the universe. Stay tuned for more exciting discoveries on the hori...

By Milan M3A



ALL
OF US
DO **NOT**
HAVE EQUAL
TALENT.
BUT **ALL**
OF US
HAVE **AN**
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OPPORTUNITY
TO DEVELOP
OUR **TALENTS**

- A.P.J Abdul kalam