THE ANNUAL MAGZINE OF JUET

VARTIKA ' 25

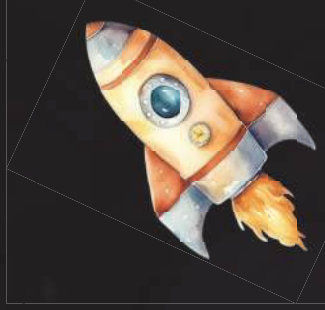
"Space: where infinity meets wonder."

या कुन्देन्दुतुषारहारधवला या शुभ्रवस्त्रावृता
या वीणावरदण्डमण्डितकरा या श्वेतपद्मासना
या ब्रह्माच्युतशंकरप्रभृतिभिर्देवैः सदा वन्दिता
सा मां पातु सरस्वती भगवती निःशेषजाड्यापहा।

“ To confine our attention to Earth would limit the human spirit. The universe awaits our curiosity. ”

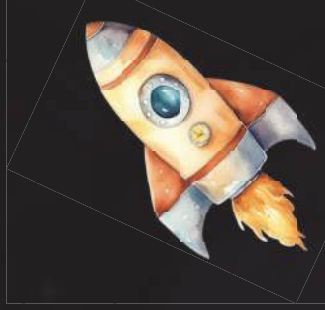
- Stephen Hawking

INDEX



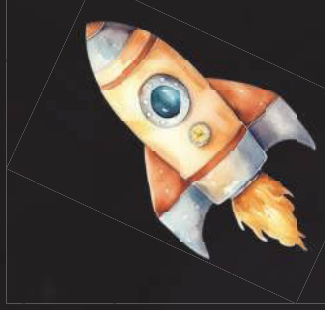
TITLE	PAGE NO.
1. Patrons	7
2. Message: Vice Chanellor	8
3. Message	9 - 18
4. JUET Youth Club	19 - 24
5. Theme	25
6. Astrology	26
7. BARC And RRCAT	27
8. Black Hole	28
8. Chaya	29
9. Colonizing Planets	30
10. Cup of Bliss	31
11. Discovery of Empty Galaxy	32-33
12. Europa	34
13. Expanding Universe	35
14. Extraterrestrial Life	36 - 37
15. Gagyanyan	38
16. Geeta Ka Amrit Jeevan	39
17. Guardians of the Infinite	40
18. If These Walls Could Talk	41
19. India’s Ascent to the Stars	42 - 43
20. Kshitiz	44

INDEX



TITLE	PAGE NO.
21. Kumbh Mela - Eternal Gathering	45
22. Lonely Bird	46-47
23. Mars Colonization	48
24. Matrabhaasha Ka Mahatva	49
25. Milky Way	50
26. NASA	51
27. Neuralink	52
28. Reflection of Lost Soul	53-54
29. Saturn: Floating Planet	55-56
30. Saturn Moons	57
31. Shadow Of Soul	58
32. Space Tourism	59
33. Space X	60
34. Stellar Dreams	61
35. The Dance of Time	62-63
36. The Double-Edged Sword of Social Media	64-65
37. The Echo of Home	66
38. The Final Frontier	67
39. The Fire Within	68-69
40. The Gift of Quiet	70
41. The Ocean Song	71-72
42. The Science of Wormholes	73

INDEX



TITLE	PAGE NO.
43. The Search of Life in Ocean World	74
44. The Symphony of Season	75-76
45. The Ties of Friendship	77
46. The Weather and the Food	78
47. The Weight of Silence	79
48. Through the Halls of Becoming	80-81
49. Time Dilation Near Black Holes	82
50. Unveiling the True Self	83-84
51. Veil of Emotions	85-86
52. Vikram Sarabhai	87
53. We Need That Someone	88-89
54. What Technology Has Done to Us	90-91
55. Wind as Breeze	92
56. Yet Again	93
57. Jean Jacques Favier	94
58. The Sketchbook	95-97
59. Flashback: Events Recap	98-102
60. Editorial Team	103

JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY

Accredited with Grade-A by NAAC & Approved U/S 2(f) of the UGC Act, 1956

A.B. Road, Raghogarh, District Guna (MP), India, Pin-473226

Phone: 07544 267051, 267310-14, Fax: 07544 267011

Website: www.juet.ac.in

CHIEF PARTONS

SHRI JAI PRAKASH GAUR JI
FOUNDER CHAIRMAN, JAYPEE GROUP
CHANCELLOR, JUET GUNA

SHRI MANOJ GAUR JI
EXECUTIVE CHAIRMAN
JAYPEE GROUP

SHRI SUNNY GAUR JI
MANAGING DIRECTOR
JAYPEE GROUP

PARTONS

PROF. D.K. RAI
VICE CHANCELLOR
JUET, GUNA

DR. SANJAY MISHRA
REGISTRAR
JUET, GUNA

PROF. VIPIN TYAGI
DEAN (A & R)
JUET , GUNA

DR. SANDEEP SRIVASTAVA
FACULTY ADVISOR
JAYPEE YOUTH CLUB

DR. KAMINI BHASIN
FACULTY ADVISOR
EDITORIAL BOARD

STUDENT EDITORIAL TEAM

PIYUSH JHA
DESIGNING HEAD

AARADHYA WAOO
CONTENT HEAD

MAYANK SETH
EDITORIAL HEAD

RIYA GUPTA
CONTENT CO HEAD

EDITORIAL: PRASHASTI, SHIVDEV, SARTHAK, JUHI, PAVANI, MADHUR, AVIKA, MAITREYI, SHWETA, ANANYA, ASMI, SHIVA, ADITYA, GARIMA, NANDINI

JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY
Accredited with Grade-A by NAAC & Approved U/S 2(f) of the UGC Act, 1956
A.B. Road, Raghogarh, District Guna (MP), India, Pin-473226
Phone: 07544 267051, 267310-14, Fax: 07544 267011
Website: www.juet.ac.in

PROF. D.K. RAI
VICE CHANCELLOR, JUET GUNA

Message

My heartfelt congratulations to the JYC Literary Wing, students, and staff of J.U.E.T. on the release of the 14th edition of Vartika in 2025.

This edition promises a captivating experience for its readers, with the thoughtfully chosen theme - Galaxia: The Eternal Chronicle of Infinite Minds. The magazine beautifully explores the boundless wonders of the cosmos, offering a profound and mesmerizing tour of the universe and the limitless potential of the human mind.

It takes the reader on a journey through time and space.

Moreover, this magazine is a true reflection of the dedication and creativity of the students who brought it to life. The innovation and talent showcased within its pages are truly inspiring, serving as a testament to the brilliance and perseverance of J.U.E.T.'s students.

Date: 22 February 2025

Prof. D.K. Rai

JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY
Accredited with Grade-A by NAAC & Approved U/S 2(f) of the UGC Act, 1956
A.B. Road, Raghogarh, District Guna (MP), India, Pin-473226
Phone: 07544 267051, 267310-14, Fax: 07544 267011
Website: www.juet.ac.in

DR. SANJAY MISHRA
REGISTRAR, JUET, GUNA (MP)

THE COSMIC QUEST: A JOURNEY THROUGH SPACE STUDIES

"A long time ago, before telescopes and rockets, humanity gazed up at the sky in wonder. The stars twinkled like diamonds, the moon changed shapes, and the sun ruled the day. But no one knew what they really were."

The Beginning

The Age of Wonder (Ancient Times)

Thousands of years ago, ancient civilizations—Egyptians, Greeks, Indians, Chinese, and Babylonians—looked at the sky and tried to understand it. They noticed patterns in the stars, which we now call constellations. The Mayans and Indians created calendars based on the sun and moon. The Greeks, like Aristotle and Ptolemy, believed that Earth was the center of the universe, and everything moved around it.

But not everyone agreed. In India, **Aryabhata** suggested that Earth spins on its axis. And in Greece, Aristarchus believed that the sun was at the center, though few believed him.

Breaking the Chains (16th-17th Century)

Then came a revolutionary thinker—**Nicolaus Copernicus**. He proposed a daring idea: the sun, not Earth, was at the center of the universe. His theory was dangerous at the time, but it set the stage for others.

Johannes Kepler discovered that planets don't move in perfect circles but in ellipses. Then came Galileo Galilei, who pointed the newly invented telescope at the sky and saw moons orbiting Jupiter—proof that not everything revolved around Earth.

The Age of Laws and Equations (17th-19th Century)

Then entered **Isaac Newton**, the man who uncovered the secret behind gravity. He explained how planets move and why things fall to the ground.

"His laws of motion and gravity shaped the future of space science"

During this time, astronomers built better telescopes and mapped more stars and planets. But the universe was still a mystery—no one had ever left Earth to see it up close.

The Rocket Age (20th Century)

Everything changed in the 20th century. Two great minds **Konstantin Tsiolkovsky** and **Robert Goddard** pioneered rocketry. They imagined of space travel when no one else believed it was possible.

Then came World War II, and countries started developing powerful rockets. After the war, a great rivalry began the **Space Race between the USA and the Soviet Union.**

1957: The Soviet Union launched Sputnik 1, the first artificial satellite. The Space Age had begun!
1961: Yuri Gagarin became the first human in space aboard Vostok
1969: The USA made history when Neil Armstrong and Buzz Aldrin walked on the moon during Apollo 11.

"That's one small step for man, one giant leap for mankind."

The Way Ahead

The Modern Era (21st Century)

Space studies exploded! Satellites, space stations, and probes explored our solar system. Private companies like SpaceX, Blue Origin, and ISRO's Chandrayaan missions made space travel more exciting. Scientists discovered exoplanets, black holes, and even signs that Mars might have had water.

Now, we dream of sending humans to Mars and even beyond.
Space is no longer just a mystery but
a frontier waiting to be explored.

The future of space exploration and potential colonization is shaping up to be one of the most exciting frontiers of human advancement. Several major trends and developments are driving this effort:

Near-Term Space Exploration Goals

Artemis Program & Lunar Base: NASA, along with international and commercial partners, aims to return humans to the Moon by the late 2020s, establishing a sustainable lunar base as a stepping stone for Mars missions.

Mars Missions: Both NASA and SpaceX are focused on sending humans to Mars, with SpaceX's Starship being a key vehicle for future colonization efforts.

Asteroid Mining: Companies like Planetary Resources and Deep Space Industries aim to mine asteroids for valuable materials, potentially creating self-sustaining Off-Earth industries.

Long-Term Colonization Prospects

Lunar Colonies: The Moon offers a testbed for long-duration habitation with resources like water ice, which could support life and fuel production.

Mars Colonization: Elon Musk envisions a self-sustaining city on Mars, leveraging in-situ resource utilization (ISRU) to generate water, oxygen, and fuel from the Martian environment.

Orbital Habitats: Concepts like O'Neill Cylinders and space stations such as Blue Origin's Orbital Reef could provide human settlements in Earth's orbit and beyond.

Interstellar Exploration: Long-term projects like Breakthrough Starshot propose using laser propulsion to send small probes to nearby star systems like Alpha Centauri.

Challenges and Breakthrough Technologies

Radiation Protection: Shielding from cosmic radiation remains a major challenge for deep-space missions.

Artificial Gravity: Research on rotating habitats may help mitigate the health effects of microgravity.

Advanced Propulsion: Nuclear thermal and ion propulsion could reduce travel times to Mars and beyond.

Self-Sustaining Ecosystems: Technologies like bio-regenerative life support systems are critical for long-term survival in space.

The Role of Private Companies

SpaceX: Pioneering reusable rockets, Mars colonization, and interplanetary transport.

Blue Origin: Working on lunar landers and commercial space habitats.

Axiom Space: Developing commercial space stations as replacements for the ISS.

China & Russia: Planning independent lunar and Mars missions, with China aiming for a Moon base by the 2030s.

Ethical & Political Considerations

Space Law & Governance: Questions remain about ownership, resource rights, and planetary protection.

Biological Contamination: Preventing Earth microbes from affecting other worlds and vice versa.

Space Economy: The potential for trillion-dollar industries in space tourism, mining, and energy production.

Conclusion

Space exploration is transitioning from a government-led endeavor to a multi-actor race, with private companies and international coalitions driving innovation. If current trends continue, humanity may establish permanent settlements beyond Earth within this century, setting the stage for a truly interplanetary civilization.

And so, the journey of space studies continues... Who knows?
May be one day, we'll be part of this great adventure!

Date: 22 February 2025

Dr. Sanjay Mishra

JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY
Accredited with Grade-A by NAAC & Approved U/S 2(f) of the UGC Act, 1956
A.B. Road, Raghogarh, District Guna (MP), India, Pin-473226
Phone: 07544 267051, 267310-14, Fax: 07544 267011
Website: www.juet.ac.in

PROF. VIPIN TYAGI
DEAN (ACADEMICS AND RESEARCH)

Message

It is a pleasure to connect with you through this esteemed publication 'VARTIKA', which serves as a platform to showcase the intellect, creativity, and passion of JUET students through their insightful articles, technical storytelling, and creative writing. JUET is committed to providing a dynamic learning environment that fosters curiosity and critical thinking. We encourage you to go beyond books and actively engage in research, innovation, and entrepreneurship.

I suggest you to make the most of the opportunities available—participate in hackathons, technical events and sincerely work on your projects. Never hesitate to think outside the box and challenge the status quo.

Wishing you all success in your academic and professional endeavors!

Date: 22 February 2025

Prof. Vipin Tyagi

JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY
Accredited with Grade-A by NAAC & Approved U/S 2(f) of the UGC Act, 1956
A.B. Road, Raghogarh, District Guna (MP), India, Pin-473226
Phone: 07544 267051, 267310-14, Fax: 07544 267011
Website: www.juet.ac.in

DR. KAMINI BHASIN
EDITORIAL BOARD (VARTIKA)
FACULTY ADVISOR (MEDIA WING)

Message

An analytical mind with a passion for learning leads an individual to achieve success and glory in life. In the era of privatization as well as globalization, the hallmark of success is hard work, and a university magazine is the perfect example of students' hard work. It harnesses the creative energies of the academic community and distills the essence of their inspired imagination in the most brilliant way possible.

So here we have "VARTIKA'25", the long-awaited magazine of JUET. The name of the magazine, "VARTIKA" may seem difficult, but it just means "Lamp, illuminant, Lantern". This magazine is a platform that exhibits the literary skills and innovative ideas of faculty members and students. We hope you enjoy reading this issue as much as we have enjoyed making it.

Date: 22 February 2025

Dr. Kamini Bhasin

JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY
Accredited with Grade-A by NAAC & Approved U/S 2(f) of the UGC Act, 1956
A.B. Road, Raghogarh, District Guna (MP), India, Pin-473226
Phone: 07544 267051, 267310-14, Fax: 07544 267011
Website: www.juet.ac.in

DR. SANDEEP SRIVASTAVA
FACULTY ADVISOR (JYC)

Message

It is with great pride and enthusiasm that I extend my warmest greetings to all readers of Vartika, the annual magazine of our university. As the Faculty Advisor of the Jaypee Youth Club (JYC), I have had the privilege of witnessing the passion and dedication of our students as they organize and participate in a diverse range of activities—be it technical, cultural, literary, or social initiatives.

The past year has been remarkable, with JYC orchestrating various successful events that foster innovation, collaboration, and community engagement.

Let Vartika serve as a reflection of our collective achievements and aspirations, igniting the minds of future generations.

Wishing the editorial team and all contributors of Vartika great success.

Date: 22 February 2025

Dr. Sandeep Srivastava

JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY
Accredited with Grade-A by NAAC & Approved U/S 2(f) of the UGC Act, 1956
A.B. Road, Raghogarh, District Guna (MP), India, Pin-473226
Phone: 07544 267051, 267310-14, Fax: 07544 267011
Website: www.juet.ac.in

MAYANK SETH
EDITORIAL HEAD (VARTIKA)

RIYA GUPTA
EDITORIAL CO HEAD (VARTIKA)

Message

Good things remain good only because they are always scarce. We am glad to pen for the university magazine as an appreciation of the commendable efforts put forth by the team for its grand beginning. The college magazine "VARTIKA" always act as a mouth piece of the college to highlight its achievements and spread its philosophy.

With each coming year the full fledged magazine "VARTIKA" portrays a platform for our young budding technocrats to share their visions and ideas on various themes. It not only represents one's creative mind but also provides a esssence of activities, events, occasions being held in the university.

Date: 22 February 2025

JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY
Accredited with Grade-A by NAAC & Approved U/S 2(f) of the UGC Act, 1956
A.B. Road, Raghogarh, District Guna (MP), India, Pin-473226
Phone: 07544 267051, 267310-14, Fax: 07544 267011
Website: www.juet.ac.in

PIYUSH JHA
DESIGNING HEAD (VARTIKA)

AARADHYA WAOO
CONTENT HEAD (VARTIKA)

Message

With immense pleasure and joy we put forward the next dynamic piece of creativity, self-expression and enthusiasm of our very own university magazine "VARTIKA". The potentials, talents, achievements and vision of our college being reflected, I identify with an emotion that each page portrays its own story. It talks about our campus with a pride of a mother and takes pleasure for each passing year. Here lies a humble hope that the readers would enjoy and appreciate it. We hope that VARTIKA will inspire and entertain readers, and serve as a lasting record of our time at this institution.

Date: 22 February 2025

JUET YOUTH CLUB

ART & EVENT

MEDIA WING

JYC
LITERARY WING

LITERARY WING

CULTURAL WING

JUET YOUTH CLUB

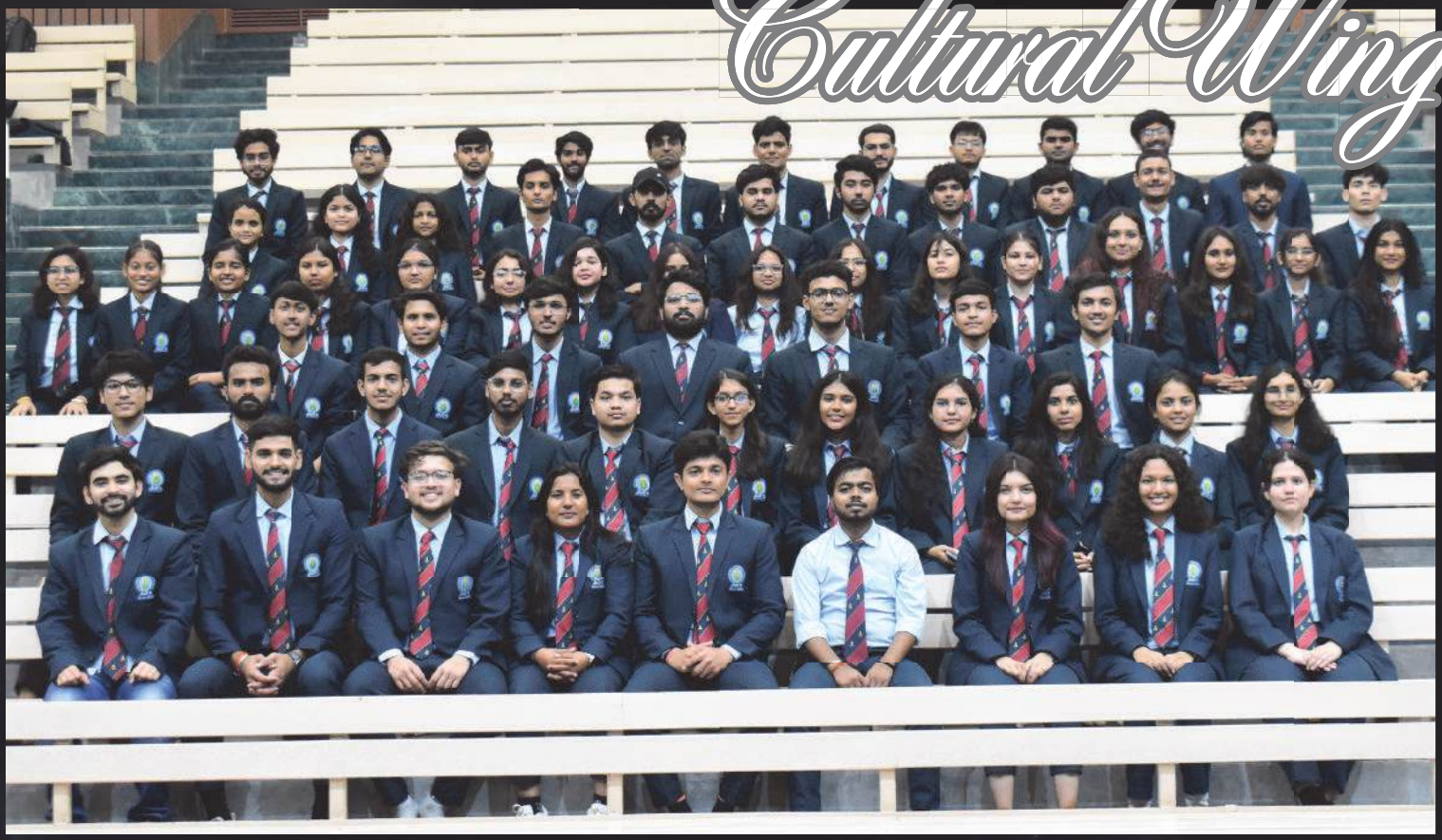
Literary Wing

The purpose of Literary Wing is to entertain, inform, challenge and get people to think about the world we inhabit and mind spaces we occupy.

Believing that the pen is mightier than the sword the literary wing attempts to harness discover and foster the literary talent of students efficacious events all throughout the year like quizes in which intelligence of participants is judged depending upon their general knowledge and awareness about the current affairs. It organizes debates, extempores, group discussions under the Debating club, every year organizes Abhivyakti and Veritas which are Hindi and English threaters respectively.

JUET YOUTH CLUB

Cultural Wing



Cultural wing is an essential member of the JUET youth club, dedicated to enhance the cultural activities of the student body. It creates a perfect balance between the cultural and social awareness activities. Each year we have specific students that are part of this body in order to create equal communication among all. The social and cultural engagements fall under this wing which is then subdivided into four sub-wings:

- Dance - Move, express, feel free.
- Music - Rhythms speak the soul.
- Drama - Stories come alive here.
- CCC - Create, Collaborate, Inspire.

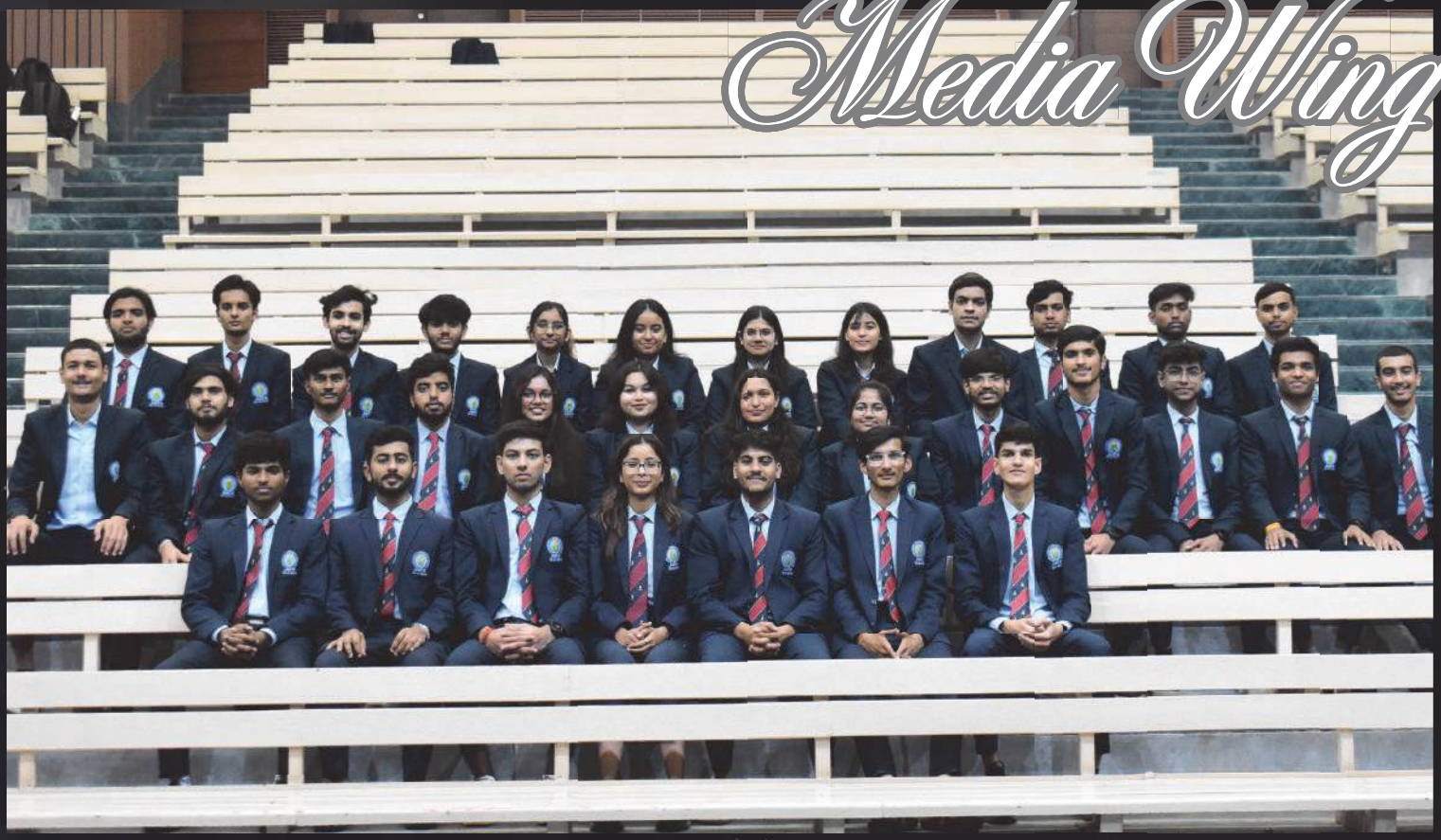
JUET YOUTH CLUB

Art & Event Wing

Creativity is inventing, experimenting, growing, taking risks, breaking rules, making mistakes and having fun. Art and Event Management wing being one of the most active wing in JUET, we believe it's the invariable right of a person to pursue his heart and passion. The wing is for the people who have an unquenchable thirst to be different. Various fun events are conducted throughout the year. Traditional night, being the major event which brings out the core of ethnicity and diversity of traditions that our college have in ample. On the menu, Treasure Hunt, Survivor, Tambola and many more.

JUET YOUTH CLUB

Media Wing



Digital signal lens reflex fitted with a 35 mm format image sensor in hands and a stack of memories in it, an eye for the perfect click, love for the lights, heads full of picturing odds looking even the idea to make one smile for another, and another for one makes this wing one of the most unique wings of JUET. From the beginning they capture every nitty gritty pose, and make it speak a thousand words. It is with great enthusiasm and interest that the freshers walk into the wing, and learn skills in the sections of Designing, Videography, Photography, acting, and short film making.

JUET YOUTH CLUB

Sports Wing

We all come here with the hope to fly, wings spread wide for the gust of wind coming by, with passion in heart and view set high, looking for inspiration and right place to try. And try you can all you want for, Here at JUET we have full-fledged youth club to support your every endeavour with the hope to flourish and an integral part of a JYC is the sport wing for those who like to have space. To reward efforts of players and to encourage the spirits we organise an annual inter college leagues and sports fest witnessing high-energy matches.

VARTIKA '25 THEME

GALAXIA: THE ETERNAL CHRONICLE OF INFINITE MINDS

Stars, Science, and Superstitions

Astrology and space are fundamentally connected, science, culture, and belief merge in this very aspect. Be it matching the horoscopes for marriage in India or abstaining from travelling during eclipses, celestial movements are considered as omens controlling daily life. Ancient Indians made use of stars for calendars and navigation, forming a strong tradition of astrology. Modern science differs between fact and myth, and yet terms such as "Shani dosha" or Rahu-Ketu continue to be the basis for superstitions. Astrology's emotional appeal remains strong, offering comfort and personal meaning where science provides answers. In India, this balance between the rational and mystical thrives, with the stars guiding both minds and hearts.

— Shweta Kumari
(241B257)

BARC and RRCAT: Catalysts of India's Scientific Progress

The Bhabha Atomic Research Centre (BARC) and the Raja Ramanna Centre for Advanced Technology (RRCAT) are among the major institutions spearheading India's nuclear and advanced technology developments.

Founded in 1954 by Dr. Homi Bhabha, BARC in Mumbai leads research in nuclear energy, reactor design, isotope technology, and medical radiation applications.

RRCAT, established in 1986 in Indore, focuses on lasers, particle accelerators, and advanced physics. It has developed laser technologies for industrial, medical, and defense use, along with synchrotron radiation sources essential for cutting-edge research in materials and biology.

Together, BARC and RRCAT drive India's self-reliance in science and technology, solving key challenges in energy, healthcare, and innovation while promoting sustainable development.

~Ananya Inkane
(241A002)

Black Holes: The Enigmatic Giants of the Universe

What is a Black Hole?

A black hole forms when a massive star reaches the end of its life cycle and undergoes gravitational collapse. This process causes the star to implode, packing all of its mass into an extremely small and dense space.

How Do Black Holes Form?

Most black holes form from the remnants of large stars. When these stars exhaust their nuclear fuel, they can no longer support themselves against the force of gravity.

Types of Black Holes

Black holes can vary in size, mass, and formation methods. There are two main types:

Stellar Black Holes: These black holes form when massive stars collapse under their own gravity.

Primordial Black Holes: Hypothetical black holes that could have formed immediately after the Big Bang.

-Pavani Modi
(241B173)

छाया

वक्त को पीछे छोड़ कर
उस रास्ते के मोड़ पर
जहां रहता था अक्सर मैं खड़ा
एक छाया के पीछे चल पड़ा ।

माना कि छू नहीं सकता था उसे
पर दिल का फ़साना था पता किसे
शहर को छोड़ हम निकल पड़े
वीरान राह पर थे बढ़े ।

साथ में थी वो वहीं
फिर भी बातें रहीं अनकहीं
हम अनजान राही थे खड़े
पर साथ में फिर चल पड़े ।

बादलों का जमावडा
था चांद को घेरे खड़ा
रात होती गई
और वो खोती गई ।

बयार का झोका बढ़ा
आसमान छट पड़ा
चांदनी बिखर गई
वो रात एक कहानी बन गई।।

-Vikram Pratap Singh
(221B443)

Colonizing Planets

The concept of human beings on other planets has intrigued mankind for centuries. Through technological innovations, this fantasy is becoming a plausible challenge, with the promise of survival in the face of daunting environmental challenges like climate change, resource scarcity, and overpopulation.

Mars emerges as the leading candidate for colonization due to its Earth-like day length, evidence of past water, and manageable distance. Organizations like NASA and SpaceX are actively working toward missions to establish a human presence, envisioning self-sustaining Martian cities.

In addition, technological advancements and increased global cooperation lead us closer to the reality of interplanetary colonization. Although it will take decades or even centuries, the possibility of humans becoming an interplanetary species appears not only feasible but inevitable, a giant leap in our evolution.

~Nandini Kaushik
(241B155)

Cup of Bliss

Life spills itself in quiet ways—
The bite of coffee on tired days,
Sunlight slicing through the blinds,
A moment where chaos unwinds.

It’s not in fireworks or grand applause,
But the tender breaks where the world
just...pause.

A lover’s breath against your skin,
The fleeting touch where dreams begin.
These fragments—sharp, alive, and rare—
Are threads of meaning tangled in air.
Not in what we chase, or what we miss,
But in what we hold—a fleeting bliss.

-Avika Sahu
(241B061)

THE DISCOVERY OF "EMPTY" GALAXIES

The cosmos has long intrigued astronomers with its vastness and mysteries, but few phenomena are as paradoxical as the discovery of so-called "empty" galaxies.

What Are "Empty" Galaxies?

"Empty" galaxies are a misleading term, as these structures are not truly empty. Instead, they lack the visible matter typically associated with galaxies. Observations reveal that these galaxies are dominated by dark matter.

How Were They Discovered?

The discovery of "empty" galaxies became possible with the advent of advanced observational techniques and instruments. Surveys like the Sloan Digital Sky Survey (SDSS) and observations from radio telescopes.

The Role of Dark Matter

Dark matter is central to understanding "empty" galaxies. In traditional galaxies, dark matter acts as a scaffold, providing the gravitational pull needed to hold visible matter together. In "empty" galaxies, dark matter dominates to such an extent that visible matter is almost entirely absent. Did these galaxies lose their visible matter over time due to interactions with other galaxies, or did they form differently from the outset?

The Mystery Continues

Despite advancements in technology and theory, "empty" galaxies remain an enigma. Future research, aided by next-generation telescopes like the James Webb Space Telescope (JWST) and the Square Kilometre Array (SKA), promises to shed light on their origins and properties.

- PIYUSH JHA (231B217)
2ND YEAR

Europa: The Icy Moon

Europa, one of Jupiter's largest moons, is a fascinating world that has captured the attention of scientists and space enthusiasts alike. Slightly smaller than Earth's Moon, Europa is covered in a thick layer of ice, beneath which lies a vast subsurface ocean. This ocean, heated by tidal forces from Jupiter's immense gravity, makes Europa one of the most promising places in the solar system to search for extraterrestrial life.

Europa's icy surface is crisscrossed with cracks and ridges, but it has relatively few craters, suggesting the ice is constantly shifting and resurfacing.

NASA's upcoming Europa Clipper mission, set to launch in the 2020s, aims to explore this mysterious moon in greater detail. By studying Europa's surface, magnetic field, and potential plumes of water vapor, scientists hope to uncover clues about the moon's ocean and its habitability.

Europa stands as a beacon of hope in the quest to find life beyond Earth, showcasing the incredible diversity and potential of our solar system.

~Juhi Gupta
(241B121)

The Expanding Universe

Astronomers are facing a cosmic mystery as the universe appears to be expanding faster than our theories predict. Dubbed the "Hubble tension," this enigma deepens with new measurements from Duke University. By studying the Coma Cluster, scientists calculated the Hubble constant—76.5 km/s per megaparsec—a rate that matches local observations but clashes with distant-universe models. This discrepancy suggests our understanding of the cosmos might need an overhaul. Could new physics or unknown forces be at play? One thing is clear: the universe isn't done surprising us yet.

— Shweta Kumari
(241B257)

Extraterrestrial Life

The search for extraterrestrial life is one of the most profound scientific pursuits. Advances in modern technology and astronomy are bringing us ever closer to the question of whether we are alone in the universe, changing our understanding of life and our place on Earth. There is evidence of past water, and icy moons with subsurface oceans, such as Europa and Enceladus, are candidates for microbial life. The uniqueness and possibility that life exists elsewhereBeyond our solar system, numerous exoplanets located within habitable zones have been identified, with advanced telescopes like the james webb space telescope examining their atmospheres for indications of life.

In the pursuit of discovering extraterrestrial intelligence, programs like SETI monitor radio signals in search of potential communications from advanced civilizations.Challenges arise from the vast distances between stars, the complexities of interpreting. biosignatures, and the ethical dilemmas surrounding humanity's response to evidence of extraterrestrial life. Despite these challenges, the search efforts drive innovation, promote international cooperation, and enhance our comprehension of the cosmos.

-ADITYA BHASIN
(241B015)

Your paragraph text

GAGYANYAN

India's Gaganyaan Abort Mission-1 marks a pivotal milestone in the country's ambitious human spaceflight program, demonstrating ISRO's commitment to astronaut safety and technological excellence. Conducted in October 2023, this mission tested the crew escape system, a critical component designed to safeguard astronauts in the event of an emergency during launch.

The mission involved a rigorous demonstration of the crew escape system's reliability. A test vehicle carrying a simulated crew module was launched to a predetermined altitude, where the escape system was activated. The module was then rapidly propelled away from the rocket to ensure astronaut safety. The successful completion of this mission builds confidence in the upcoming crewed flights under the Gaganyaan program, which is slated for launch by 2025.

-Nandini Kaushik
(241B155)

Geeta Ka Amrit: Jeevan Ka Divya Marg

The Bhagavad Gita is not just a scripture; it is the divine voice of Lord Krishna that transcends time, illuminating humanity with eternal wisdom. In the chaos of Kurukshetra, Krishna's teachings to Arjuna resonate with the struggles of every soul seeking purpose and peace. He reveals that life's essence lies in selfless action (Karma Yoga), unwavering faith (Bhakti), and the realization that the atma (soul) is eternal and untouched by worldly fears.

Krishna's message inspires one to surrender to the will of God, to believe in dharma, and be equanimous in all circumstances. The Gita is a guide beyond the guide, it is an enlightenment, a link between the human and the divine. Its words hold the magic to vanquish doubt, fear, and sorrow and help seekers to the path of liberation. Let Gita be your compass to navigate the way of divine truth and inner bliss. Believe, and the universe unfolds.

-Shristi Mishra
(241B253)

Guardians of the Infinite

Beneath the heavens' starry glow,
The seeds of life began to grow.
On Earth, a cradle, green and blue,
A fragile sphere, our haven true.

Her rivers carve, her mountains rise,
Her breath becomes the winds and skies.
But far beyond, in depths of space,
Lies the vast, uncharted grace.

For every stream and blade of grass,
Each fleeting cloud that shadows pass,
Depends on us, a fleeting spark,
To guard the light within the dark.

Among the stars, our fate is tied,
To cherish Earth, or cast aside.
The universe may vastness claim,
But Earth's our only timeless flame

-Pavani Modi
(241B173)

If These Walls Could Talk: A Campus Speaks

Live with your stories. Every morning, I welcome dreamers, late-night coders, and dawn seekers, listening to footsteps and absorbing ambitions. My classrooms buzz with ideas, my canteens echo with laughter, and my staircases hold whispers of heartbreaks and friendships. You leave your mark on my grass, walls, and desks, shaping me as much as I shape you.

I grow with every batch, learning from your seminars, debates, and bold risks. I have seen courage spark growth in generations before you, and I will see it in you too. When you leave, you will leave behind laughter, tears, and aspirations. In return, I will give you resilience, camaraderie, and the strength to embrace the unknown.

One day, you will come back with stories, and I will remind you: look how far you have come, but never forget where you began. Your journey is my legacy.

-Dhruv Diggiwal
(241B086)

India's Ascent to the Stars

Beneath the skies of sapphire hue,
A dream was born, bold and true,
In the heart of Bharat, a vision soared,
To touch the stars, to explore and more.

From humble grounds, with toil and care,
A nation rose, prepared to dare.
In minds of brilliance, plans took flight,
To conquer space, to claim the night.

Aryabhata, the pioneer bold,
In 1975, a story told.
Of India's entry into the skies,
A marvel born from vision-wise.

The PSLV, a steadfast steed,
Fulfilled the nation's growing need.
With satellites sent to orbit's embrace,
India's prowess found its place.

Through Chandrayaan, we touched the moon,
In silver glow, a triumph soon.
Water's trace, a celestial find,
A testament to the Indian mind.

Then Mangalyaan, a historic feat,
Mars welcomed India's daring fleet.
A frugal marvel, a genius blend,
A story that made the cosmos bend.

In ISRO's hands, the future lies,
A guardian of the Indian skies.
From navigation to Earth's view,
Solutions emerge for the global queue.

The world looks on, in awe and praise,
At India's space, a glowing blaze.
A nation once bound by earthly ties,
Now scripts its saga across the skies.

Through challenges, storms, and shadowed light,
India's spirit burned ever bright.
A testament to relentless strife,
To innovation, dreams, and life.

O Bharat Mata, your legacy soars,
Across the heavens, to distant shores.
With each new launch, a history made,
In cosmic realms, your glory laid.

As the stars above bow in reverence,
India's space story gains its presence.
A tale of grit, of dreams profound,
Of excellence that knows no bounds.

To the stars, to infinity, we rise,
India, the jewel of the cosmic skies.

-Arpita Rai
(231B064)

क्षितिज

मैंने दूर परक उसको देखा,
कभी दौड़ – भाग उसको जाऊं ।
तभी मान कुबधि की बात प्रभु,
भुलान तुरत पुर कषि पाऊं ।।

जस निकट जाऊ तस दूर वो,
स्थिति बड़ी अड़चन में थी ।
देखूं जो खग गगन में मैं,
हित –चित अंत नयन में थी ।।

मैं बीस कोश को पग धरौ,
पुनि बीस कोश गिरी कूल निहारौ।
मनु ढूंढत हूक मझारन में,
मैं वृत्त तल कभी क्षितिज तिहारौ ।।

~Vinay Singh
(211b348)

Kumbh Mela: The Eternal Gathering

The Kumbh Mela is the largest religious gathering in the world and is held at four sacred locations in India, namely Prayagraj, Haridwar, Nashik, and Ujjain. Its origins lie in the Hindu legend of the Samudra Manthan where drops of nectar spilt at these locations during the battle between gods and demons for immortality from heaven. Bathing in the rivers during Kumbh is said to cleanse sins and provide liberation.

The festival timing is based on astrological alignments of the Sun, Moon, and Jupiter. The Purna Kumbh Mela is held every 12 years, while the Ardh Kumbh Mela occurs every six years at Haridwar and Prayagraj. The grandest, Maha Kumbh Mela, happens once every 144 years in Prayagraj.

It dates back to ancient India and is a long-hailed event as chronicled by Chinese traveler Xuanzang in 7th century CE. Now, millions, including saints like Naga Sadhus, come to bathe, worship, and celebrate. It speaks volumes about India's rich cultural and spiritual heritage, Kumbh Mela has remained a timeless symbol of faith and devotion.

-Garima Sharma
(241B099)

The Lonely Bird

Alone she flies,
You beautiful yet witty bird
exploring the evening skies
Purposefully avoiding the herd.
Engaged in her own talk
Perhaps taking the other worldly walk.

Everyday she dwells
Lonely without a pair;
Casting her mysterious spells,
In the garden we both share,
How melodiously she sings
Making cuckoos forget the springs.

Lovely in her own way
tempting my ascetic soul
to approach, then teasingly she flies away.
Each day, I then took a stroll
Loving her from the shadows shade
Gazing until her sight did fade.

Now the season is getting old
And rarer is her flight
Such a beauty she was to behold
For life flowed with her mere sight.
What's left is her essence
With a desire for her mere presence.

~Vikram Pratap Singh
(221b443)

The Future of Space Exploration: Mars Colonization

Mars presents a unique opportunity for colonization due to several factors. Its day length is similar to Earth's (approximately 24.6 hours), it has polar ice caps containing water, and its atmosphere, while thin and composed mostly of carbon dioxide, provides potential for in-situ resource utilization. Furthermore, Mars's proximity to Earth—ranging from 54.6 million to 401 million kilometers depending on orbital positions—makes it more accessible than other celestial bodies.

The Vision for the Future

A successful Mars colony could revolutionize humanity's future. It would provide a backup plan for civilization in case of catastrophic events on Earth and open up new avenues for scientific discovery. Additionally, Mars colonization could serve as a springboard for exploring other parts of the solar system, such as the moons of Jupiter and Saturn.

Mars colonization is not just a technological endeavor but a testament to humanity's enduring spirit of exploration and innovation. As we venture into the cosmos, the Red Planet may become a beacon of hope, resilience, and the limitless potential of human ingenuity.

~Kavya Jain
(241B123)

मातृभाषा का महत्व

माँ के आंचल सी प्यारी, जो दिल को सहलाती है,
मातृभाषा वह धारा है, जो जीवन को बहलाती है।
पहला शब्द जो बोला था, उसी से जुड़ी पहचान,
मातृभाषा से ही रचते हैं, हम अपने अरमान।

विदेशी भाषा चमकती है, जैसे चाँदनी रात,
पर अपनी भाषा का होता है, अलग ही सौगात।
यह संस्कृति का आधार है, यह रिश्तों की डोर,
मातृभाषा से समझते हैं, अपनी जड़ें और जोर।

पढ़ो, लिखो, बोलो इसे, सम्मान इसका बढ़ाओ,
इसमें छिपा है ज्ञान अनमोल, इसे दुनिया को दिखाओ।
भाषा से है पहचान हमारी, भाषा से ही है सम्मान,
मातृभाषा को अपनाकर, रचो उज्ज्वल निदान।

जो अपनी भाषा भूलता है, वह जड़ से कट जाता है,
अपनी मातृभाषा में ही, असली सुख मिल पाता है।
मातृभाषा सिखाती है, अपनापन और प्यार,
यह हमारे अस्तित्व का है, सबसे सुंदर आधार।

तो गर्व करो अपनी भाषा पर, इसे सिरमौर बनाओ,
मातृभाषा के दीप जलाकर, ज्ञान का प्रकाश फैलाओ।

-Asmi Gupta
(241B053)

MILKY WAY

The Milky Way is our home galaxy, vast and awe-inspiring, containing secrets beyond human imagination. The hazy band of light stretched across the night sky is at once a scientific wonder and cultural inspiration.

What is the Milky Way?

The Milky Way is a barred spiral galaxy, with billions of stars, gas, dust, and dark matter, held together by gravity.

Location in the Galaxy

Our solar system is located about 27,000 light-years from the galactic center in one of the Milky Way's spiral arms, known as the Orion Arm or Local Spur.

Ancient Observations and Naming

The term Milky Way originates from Greek mythology, where it was considered a spilt "milk path" formed from the breast milk of Hera, queen of the gods.

-Madhur Gupta
(241B137)

NASA

NASA: Pioneering the Frontier of Space Exploration

The National Aeronautics and Space Administration (NASA) is the United States' leading organization for space exploration, scientific discovery, and aeronautics research.

Key Achievements

1. Apollo Program: NASA landed the first humans on the Moon during the Apollo 11 mission in 1969, a monumental milestone in human history.

2. Mars Exploration: Through rovers like Curiosity and Perseverance, NASA has been studying the Red Planet, searching for signs of ancient life.

3. Artemis Program: Aimed at returning humans to the Moon and establishing a sustainable lunar presence as a stepping stone to Mars.

NASA has advanced our understanding of Earth's climate, solar activity, and the origins of the universe through missions like Voyager, James Webb Space Telescope, and Earth-observing satellites.

-Madhur Gupta
(241B137)

Neuralink

Neuralink, co-founded by Elon Musk in 2016, aims to develop brain-machine interfaces (BMIs) to bridge the gap between humans and technology. Neuralink's technology involves tiny, flexible threads thinner than a human hair, implanted into the brain to read and transmit neural activity, enabling direct communication between the brain and external devices.

The medical applications of Neuralink are promising, with the potential to treat conditions like Alzheimer's, Parkinson's, spinal cord injuries, and mental health disorders. Beyond medicine, Neuralink envisions enhancing human cognition, telepathic communication, and controlling machines with thoughts.

However, ethical concerns around privacy, consent, and the potential for misuse persist. The idea of merging human brains with AI sparks debates about the nature of humanity. As Neuralink's technology progresses, it raises questions about how far we can push human-machine integration before losing what makes us human.

~~Ananya Inkane
(241A002)

Reflections of a lost soul

I am trying to find myself in the mirror,
But I keep failing.
Standing amid the ruins of my past,
Still trying to figure out,
who I have become and why.

If you discovered what I did to survive,
Would you still look at me like you do now?
Will you be unmoved?
Or will you be skeptical?

Can I entrust my vulnerability to you?
Uncertainty clouds my every emotion.
What are these fleeting thoughts that haunt me?
I often question myself.

Do my feelings hold significance?
The answer echoes in the void:Silence.

Because I struggle to accept,
To comprehend that I am truly alone?
Isolated, forgotten, bereft.

Perhaps hope is nothing but a mirage,
A mere illusion, an elusive dream.
We hope for something to happen,
But it never does,
And we are left stranded, aimlessly adrift.

In the reflection of my own eyes,
I'm lost, conflicted, and consumed
By the sadness that seems to linger,
A weight that I cannot remove

-Shristi Mishra
(241B253)

Saturn: The Planet That Could Float on Water

Saturn, the sixth planet from the Sun and second-largest in our solar system, is famous for its spectacular ring system. However, beyond this famous face is an interesting fact you may not know: Saturn is so light, it could float on water-if you can find a bathtub large enough!

Why Would Saturn Float?

The key to Saturn's buoyancy lies in its density. Saturn is a gas giant primarily composed of hydrogen and helium, which are extremely lightweight elements. Its average density is just 0.687 grams per cubic centimeter, which is lower than water's density (1 gram per cubic centimeter). This makes Saturn the only planet in our solar system with a density low enough to theoretically float in water.

What Makes Saturn So Light?

1. Gaseous Composition: Contrary to terrestrial planets like Earth or Mars, Saturn is more of a gas giant with no solid surface but mostly composed of gases. This giant planet hosts a huge atmospheric mixture of approximately 96 percent hydrogen and around 3 percent helium.

2. Huge Size: Though Saturn is over 760 times in volume of the Earth, its mass is just about 95 times the size of the latter. Such enormous size with lower mass leads to low density in Saturn.

3. Core and Composition: The core of Saturn is believed to be a tiny, dense central core made up of rock and ice. Further layers comprise metallic hydrogen, liquid hydrogen, and gas. Why Can't Saturn Actually Float? It's fun to imagine Saturn floating in water, but impossible in reality: The "bathtub" would have to be unimaginably large, larger than Earth itself, to accommodate a planet as massive as Saturn. And Saturn's gaseous structure would likely collapse under water's pressure, changing its composition and properties.

-Shiva Upadhyay
(241B241)

Saturn's Mystical Moon and Its Secrets

Amongst all the fascinating celestial bodies, Titan, Saturn's largest moon, is one of the most intriguing ones in the solar system. Hydrocarbon lakes, its stunning thick atmosphere, and Earth-like weather patterns tickle the imaginations of students, scientists, and enthusiasts alike.

Like Earth, Titan is considered the only other object in the Solar system to have stable liquids on its surface. But instead of water, Titan's rivers, lakes, and seas flow with liquid methane and ethane. These hydrocarbons go through a cycle somewhat similar to Earth's water cycle with monotonic phenomena, such as rain, evaporation, and cloud formation.

It remains one of the most fascinating and mysterious bodies in our Solar System. Its dense atmosphere, methane lakes, intricate chemistry, and potential for prebiotic processes make it a key target for future exploration. Titan could reveal much not only about early conditions on the Earth but also about life elsewhere in the universe. As exploration continues, Titan will slowly divulge the secrets it holds and reveal the wonder that is this mystifying moon

~Juhi Gupta
(241B121)

Shadows of the Soul

In the quiet corners of the heart,
Where light and darkness play their part,
Lie shadows deep, both faint and vast,
Echoes of a forgotten past.

A fleeting smile, a hidden tear,
The soul's reflection, raw and clear.
Dreams that linger, fears that stay,
A dance of shadows in the gray.

Each shadow whispers, soft and low,
Of love once found, of letting go.
Of battles fought, of lessons learned,
Of bridges crossed, and some still burned.

But in the dark, a truth takes flight,
Shadows cannot exist without light.
For every sorrow, every ache,
A brighter dawn is sure to wake.

-Nandini kaushik
(241B155)

स्पेस टूरिज़म: व्यावसायिक अंतरिक्ष यात्रा का अगला मोर्चा

आज के समय में अंतरिक्ष केवल वैज्ञानिकों औरअंतरिक्ष यात्रियों तक सीमित नहींरह गया है। हालही में, स्पेस टूरिज़मने अंतरिक्ष यात्रा को एक नएआयाम में प्रवेश करायाहै, जिससे आम लोग भीअंतरिक्ष की यात्रा काअनुभव प्राप्त कर सकते हैं।इस लेख में, हमस्पेस टूरिज़म के विकास, इसकेवर्तमान स्थिति और भविष्य केसंभावित बदलावों पर चर्चा करेंगे।

प्रमुखकंपनियाँ:

1. **ब्लू ओरिजिन (Blue Origin):**जेफ बेजोस की ब्लू ओरिजिन ने 2021 में अपनी न्यू शेफर्ड रॉकेट के जरिए कुछ नागरिकों को अंतरिक्ष की सीमाओं तक पहुँचाया।
2. **वर्जिन गैलेक्टिक (Virgin Galactic)**: रिचर्डब्रैनसन की वर्जिन गैलेक्टिक ने पहले से ही कम ऊंचाई तक पर्यटकों को भेजने की शुरुआत कर दी है, और यह सबसे सस्ती स्पेस टूरिज़म सेवा प्रदान करने का लक्ष्य रखता है।

-Madhur Gupta
(241B137)

SPACE X

SpaceX, founded in 2002 by Elon Musk, is a private aerospace company aiming to "make life multi-planetary." It has revolutionized space exploration by reducing costs and challenging traditional government-led space programs.

Key innovations include reusable rocket technology, such as the Falcon 9, which drastically lowers launch costs by returning to Earth for reuse. SpaceX's Dragon spacecraft was the first private vehicle to deliver cargo and astronauts to the International Space Station (ISS), setting new benchmarks in spaceflight.

While SpaceX has faced challenges, such as environmental concerns and testing failures, these are seen as opportunities for growth. The company has proven that private enterprises can achieve milestones once reserved for government agencies, paving the way for humanity to become a multi-planetary species.

~ Nandini Kaushik
(241B155)

Stellar Dreams

Beneath the endless sky so wide,
Where cosmic wonders coincide.
The Milky Way, a river of light,
Guides us through the silent night.

Planets dance in rhythmic time,
Orbits traced in perfect rhyme.
Moons reflect their sunlit beams,
In the realm of stellar dreams.

Asteroids and meteors soar,
Across the heavens, forevermore.
Comets blaze their fiery trails,
Leaving behind ethereal veils.

The cosmos sings a timeless song,
An anthem where we all belong
In space's embrace, we find our place,
A tiny part of this infinite grace.

-Pavani Modi
(241B173)

The Dance of Time

The clock ticks softly in the still of night,
Marking moments that vanish out of sight.
A rhythmic pulse, both tender and bold,
A tale of life, of time untold.

Each second whispers a fleeting beat,
A gentle brush, a subtle retreat.
Moments bloom like flowers in spring,
Only to fade, carried on time's wing.

Noon strikes its chord, bold and bright,
The dance grows steady under the light.
Shadows lengthen, a sign of shift,
As time glides on, a gift, adrift.

Evening hums a mellower tune,
Bathed in silver by a radiant moon.
Stars take their place in the velvet sky,
As time spins softly, the hours fly.

Seasons join the endless parade,
Spring's renewal, summer's cascade.
Autumn's colors, winter's frost,
In time's grand dance, nothing is lost.

A tapestry woven in moments and days,
Life flows onward in intricate ways.
We're partners in this eternal reel,
Bound to its rhythm, bound to feel.

Time teaches patience, love, and regret,
Moments cherished, we mustn't forget.
Its waltz is ceaseless, its tempo divine,
In the dance of time, we all entwine.

The clock still ticks, the rhythm remains,
A dance of laughter, joy, and pains.
With every step, a story unfolds,
In the dance of time, we're forever consoled.

~Ananya Inkane
(241A002)

THE DOUBLE-EDGED SWORD OF SOCIAL MEDIA: UNPACKING ITS IMPACT ON MENTAL HEALTH

As we scroll through our social media feeds, we're often greeted with curated highlight reels of our friends and acquaintances' lives. But a complex web of emotions, anxieties, and insecurities lies beneath the surface of likes, comments, and shares. Social media, a phenomenon that was meant to connect us, has inadvertently become a double-edged sword, impacting our mental health in profound ways.

On one hand, social media has revolutionized the way we communicate, access information, and build communities. It has provided a platform for marginalized voices to be heard, for social movements to gain momentum, and for people to connect with others who share similar interests and passions.

However, the flip side of this coin is a more sinister reality. Social media has been linked to increased symptoms of depression, anxiety, and loneliness. The constant stream of information, the pressure to present a perfect online persona, and the fear of missing out (FOMO) can be overwhelming, leading to feelings of inadequacy, low self-esteem, and burnout.

Moreover, social media platforms are designed to be addictive, using algorithms that exploit our psychological vulnerabilities. The infinite scroll, notifications, and likes activate the brain's reward system, releasing feel-good chemicals such as dopamine. This can lead to a vicious cycle of craving and consumption, as we mindlessly scroll through our feeds, seeking validation and distraction.

So, what can we do to mitigate the negative impacts of social media on our mental health? Firstly, it's essential to establish boundaries and limits. Set aside specific times of the day to check your social media accounts, and avoid mindless scrolling. Secondly, curate your feed by unfollowing or muting accounts that make you feel bad about yourself or others. Thirdly, engage in offline activities that bring you joy and fulfillment, such as reading, exercising, or spending time with loved ones.

Ultimately, it's crucial to recognize that social media is merely a tool, and like any tool, it can be used for good or ill. By being mindful of our social media use, setting boundaries, and cultivating offline connections, we can harness the benefits of social media while minimizing its negative impacts on our mental health.

-Shiva Rathore
(241b240)

ACCRETION DISK

An accretion disk is a swirling eddy of gas, dust, and other materials forming into a disk shape around a massive object such as a black hole, a neutron star, or a young star. It's not only visually mesmerizing but rather crucial in some of the universe's most energetic processes. Accretion disks are formed from matter, mostly from a near star or the interstellar medium, that gets pulled toward an object's powerful gravity. However, instead of falling straight into the object, the material goes around in spirals because it has angular momentum, forming a flattened, disk-like structure. Accretion disks are examples of the universe's dynamic, interconnected nature. By studying these brilliant rings of matter, astronomers get important clues from them about stellar and galactic formation and evolutions and indeed the behavior of black holes, too.

~Sarthak Sirvaiya
(241b230)

THE FINAL FRONTIER

Space is becoming the next booming industry, driven by private companies revolutionizing exploration and technology. The reusable rockets such as SpaceX's Falcon 9 have reduced the launch costs by 90%, and space is coming closer than ever. Satellite internet is transforming connectivity, and the space tourism business is growing; Blue Origin already offers suborbital flights and luxury space hotels are on their way. Asteroid mining can unlock trillions in resources, and space-based manufacturing is advancing medicine and tech thanks to microgravity. However, challenges like space debris and ownership laws are hurdles that must be addressed. Space is no longer just a future concept—it's rapidly becoming a reality, offering endless innovation and opportunity.

— Shweta Kumari
(241B257)

The Fire Within

DEEP IN THE SHADOWS WHERE
SILENCE DWELLS,
A SPARK IGNITES, A STORY IT
TELLS.
BORN OF DREAMS, BOTH WILD
AND FREE,
A BLAZING FIRE BURNS WITHIN
ME.

IT WHISPERS SOFTLY, THEN
ROARS ALOUD,
DEFYING FEAR, UNBOWED,
UNCLOUDED.
THROUGH TRIALS FIERCE, IT
DOES NOT WANE,
A GUIDING FLAME THROUGH
JOY AND PAIN.

WHEN STORMS ARISE AND SKIES TURN GRAY,
THE FIRE WITHIN LIGHTS UP MY WAY.
IT FUELS MY STEPS, IT LIFTS MY GAZE,
THROUGH ENDLESS NIGHTS AND WEARY DAYS.

NO CHAINS CAN BIND, NO DOUBT CAN SMOTHER,
ITS HEAT TRANSCENDS LIKE NO OTHER.
FOR IN ITS GLOW, I FIND MY VOICE,
A WILL UNSHAKEN, A FEARLESS CHOICE.

SO LET IT BURN, THIS FIRE INSIDE,
A TESTAMENT TO THE STRENGTH I HIDE.
FOR IN MY HEART, THIS TRUTH I SEE,
THE FIRE WITHIN WILL SET ME FREE.

-DIVYANSHI GHATIYA
241B092

The Gift of Quiet

In stillness, I find a quiet grace,
A gentle world, my own small space.
No voices linger, no shadows chase,
Just calm that time cannot replace.
The breeze hums soft, the air feels light,
My heart beats steady in the quiet night.
No need for words, no need for sound,
In solitude, peace is always found.
A tender glow, a secret bliss,
A gift wrapped softly in moments like this.
Alone, I bloom, and slowly see,
Solitude's beauty sets me free.

— Shweta Kumari
(241B257)

The Ocean's Song

The ocean sings a mournful tune,
Beneath the light of a silver moon.
Its waves arise, its waves retreat,
A rhythm steady, a heartbeat.

It holds the tales of ancient lore,
Secrets hidden on the ocean floor.
Its depths are vast, its power fierce,
A force of nature none can pierce.

Its whispers call the lost at sea,
A haunting hymn, wild and free.
The sailors hear its siren's plea,
A song of wonder and mystery.

The ocean speaks of time untold,
Of treasures hidden, of riches bold.
Of kingdoms sunken, lost to waves,
Of heroes' journeys and their graves.

The coral gardens bloom below,
A vibrant world where secrets grow.
Each reef a palace, each tide a guide,
A kingdom where the wild abide.

So listen closely to its song,
A tale of life, both short and long.
For in its depths, we all belong,
Bound together by the ocean's song.

~Nandini Kaushik
(241B155)

THE SCIENCE OF WORMHOLES: FACT OR FICTION?

Wormholes, commonly envisioned as cosmic shortcuts, have fascinated scientists and science fiction writers for years. Originally proposed in 1935 by Albert Einstein and Nathan Rosen under the theory of general relativity, these hypothetical objects suggest a shortcut between two points in spacetime, allowing for instantaneous transportation through great cosmic distances.

Despite the absence of evidence, wormholes have become a staple in science fiction, where they are often portrayed as gateways to interstellar exploration or even time travel. Additionally, intense radiation surrounding a wormhole could destroy anything attempting to pass through. The theoretical possibility of time travel through wormholes also raises complex paradoxes that challenge our understanding of causality and physics itself.

~Ananya Inkane
(241A002)

The Search for Life on Ocean Worlds

Just think of the life that might lie beneath frozen surfaces, hidden oceans, and worlds like Europa of Jupiter and Enceladus of Saturn with the possibility of living organisms deep inside their dark, icy oceans that are actually warm, heated up by natural reactors under their ices.

The scientists said these moons would have environments very similar to what is seen in Earth's deep-sea vents, where microorganisms live with no sunlight around.

By emitting water and organic molecules from their geysers, Enceladus suggests perhaps there is life there —or was. Europa's shifting ice and ocean suggest it's more active than we thought.

What if we find life there? That would change everything, everything that can be thought in terms of extraterrestrial life and challenge what we thought we knew about where life can exist. These moons are far more than icy, distant worlds; they might just hold the key to the biggest question of all: Are we alone?

-Avika Sahu
(241B061)

The Symphony of Seasons

Beneath the vast and endless sky,
A symphony plays as time drifts by.
Each note a season, soft or grand,
Composed by nature's gentle hand.

Spring's Prelude
The violins hum with a vibrant cheer,
As blossoms whisper, "Life is here."
Streams sing softly, birds take flight,
The dawn of hope, bathed in light.

Summer's Crescendo
Drums of thunder, bold and loud,
The sun stands tall, unyielding, proud.
Fields of gold sway to the beat,
A fiery rhythm in the summer heat.

Autumn’s Elegy

Cellos weep as leaves cascade,
A wistful tune in amber shade.
The wind hums low, a mournful sigh,
As days grow short and whispers die.

Winter’s Refrain

Pianos echo in icy halls,
Snowflakes dance as silence falls.
The world slows down in frozen grace,
A timeless pause, a tranquil space.
And so the seasons rise and fade,
A masterpiece the earth has made.
Through every note, we come to know,
Life is a symphony, ebb and flow.

~Ananya Inkane
(241A002)

The Ties of Friendship

A friend is like a gentle breeze,
That soothes your soul and sets you at ease.
Through darkest nights and brightest days,
They walk beside you in countless ways.

A loyal heart, a listening ear,
They share your laughter, calm your fear.
In storms of life, when you feel small, A
friend will catch you if you fall.

Not bound by blood, but tied by heart,
A bond so strong, it won't depart.
Through time and space, they'll always stay,
A guiding light along the way.

So cherish the friends who lift you high,
Who bring you stars from the endless sky.
For life is richer, joy more true,
With friends who love and believe in you.

~Shiva Upadhyay
(241b241)

THE WEATHER AND THE MOOD

The monsoon is about to depart
For it has done it's part
Filling the earth with beauty and florence
And the hearts with love and romance

Now before the season gets old
And the flowers are sold
Let's go and buy
Together you and I

Oh the beauty on it's peak
But I dare to speak
So silently I stare
The one whom I care

Among the many weathers
We'll touch our feathers
Then we'll fly
Like birds young and shy

The season will go
The darkness will flow
The world will be unfair
But still I will be there.

-Vikram Pratap Singh
(221B443)

The Weight Of Silence

In the quiet, the world unfolds,
A symphony played with no sound,
Echoes of truths left untold,
In silence, the deepest bonds are found.

The weight of words unsaid is vast,
A shadow lingering in the air,
Stories of futures tied to the past,
Fragile threads woven with care.

Silence speaks where voices fail,
In tearful eyes and trembling hands,
It tells the tales of every trail,
Of battles fought in unseen lands.

So much is born in this sacred void,
A moment stretched through endless time,
A space where hearts are not destroyed,
But softened, healed, and made to climb.

Listen close to what's unsaid,
For silence hides a sacred art.
It speaks of all the tears we've shed,
And holds the pieces of the heart.

-Bhumika Yadav
(241B073)

Through the halls of becoming

Between the pages of borrowed books,
I seek the answers life never gives.
Dreams unfold in crowded nooks,
While reality whispers, "This is how life lives."

The clock ticks loud in the midnight haze,
Deadlines loom like clouds of doubt.
Yet in my heart, a stubborn blaze,
Keeps the fear of failure out.

Cafeteria meals and ramen nights,
Paychecks stretched paper-thin.
Hoping hard that these uphill fights,
Lead to where my dreams begin.

Laughter shared in fleeting breaks,
Tired eyes but hearts that soar.
Finding purpose in the steps we take,
Even when unsure what's in store.

So here I stand, still finding my way,
A student of life in every sense.
Each lesson learned, I'll proudly say,
Built my future from the present tense.

-Bhumika Yadav
(241B073)

Time dilation Near Black Holes

Time dilation near black holes, according to Einstein's theory of general relativity, occurs when extreme gravity warps spacetime, making time slow down in stronger gravitational fields. The closer an object gets to a black hole, the slower time goes for an observer near the event horizon compared to one farther away.

A 2023 study examined supernovae explosions from 7 billion years ago, which provided evidence for time dilation and insight into how black holes would have affected the passage of time in the early universe. This phenomenon is quite interesting and has implications for space travel.

If a spacecraft ever tried to approach a black hole, the travelers would see time pass much more slowly compared to passengers on Earth. Days could mean years for observers far out from the black hole. Such travels remain a thing of the distant future as far as current technology will go due to the extreme conditions around black holes.

-Garima Sharma
(241B099)

UNVEILING THE TRUE SELF

Beneath the noise, beneath the show,
Lies a truth that few may know. A
spark within, a quiet call, A boundless
essence beyond it all.

The surface speaks, but fleeting lies,
For deeper truths elude the eyes. In
silent depths, the answers rest, The
heart's own whispers guide the quest.

Through shadows thick, through
doubts profound, A path to self can
still be found. Each step unveils, each
moment gleams, A bridge from fears
to endless dreams.

Let go the weight of borrowed roles, Of names and limits others mold. Face the stillness, greet the night, And find your essence burning bright.

The self's no stone, but fluid grace, A shifting star in endless space. Embrace the change, the ceaseless flow, For knowing self is how we grow.

So journey forth, unbound, sincere, And cast aside the veil of fear. The truth unfolds, and you will see Your truest self is meant to be.

-Asmi Gupta
(241B053)

Veil of Emotions

The silent corners of the heart
Where light and darkness share their roles
Here shadows lie, shadows deep and faint,
Echoes of a bygone yore.
A smile that waned, a drop that sipped,
The soul's mirror together-raw and clear.
Dreams stay, fears weigh;
Tango of shadows shot in gray.
Every shadow speaks, saying true,
Of love once held, of letting go.
Of wars fought, of lessons learned,

Of bridges crossed, some still burned.
And in darkness, a truth soars high,
Without light, shadows can never high.
For every sorrow, every thirst,
A brighter dawn has to burst.
So embrace the shadow;
allow them to be
One with the grander symphony of your soul.
For here, therein, the self is whole—
The light, the dark, and the shadows of the soul.

-ADITYA BHASIN
(241B015)

A Tribute to Dr. Vikram Sarabhai
The Father of India's Space Program

Dr. Vikram Sarabhai, a visionary scientist and pioneer, is known as the father of India's space program. Born in 1919, Sarabhai recognized the potential of space technology for national development in a newly independent India. His vision led to the establishment of the Indian National Committee for Space Research (INCOSPAR) in 1962, which later evolved into the Indian Space Research Organisation (ISRO).

Mr. Sarabhai had led India to place its first satellite, Aryabhata, into space in 1975. For Mr. Sarabhai, the application of space technology addressed societal challenges such as communication, education, and resource management. His famous words, "We must be second to none in the application of advanced technologies," still inspire the missions of ISRO.

-Rishabh Kasaudhan
(241B206)

WE NEED THAT SOMEONE

In those troubling times
When the heart is heavy
and the mind is hazy
we need a shoulder to lean on,

When the spirit is low
and life is losing its flow
we need those arms to hold on,

When the vision is blind
And the path is difficult to find
we need those eyes to rely on,

When everyone has gone
And the soul is left alone
We need someone to dwell with,

When the ears are closed
for the world so opposed
We need that voice to disturb us,

When the soul is apart
From another that is its part
We need hope to meet again.

— Vikram Pratap Singh
(221B443)

What Technology Has Done To Us

The greatest impact of technology on human life is that society has changed from hunting and gathering to using the most advanced resources. Electricity, the internet, computers, and smartphones have made a revolution in industries, communication, and day-to-day lives. Transportation, healthcare, and renewable energy technologies have enhanced quality of life, addressed global issues, and achieved cutting-edge progress.

However, such advantages are greatly accompanied by a number of severe environmental consequences. Resource depletion, energy consumption, pollution, e-waste, deforestation, and climate change are some of the serious challenges associated with technological growth.

For example, production and mining have disrupted ecosystems while fossil fuel reliance accelerates global warming.
A balanced approach will help to mitigate these effects. Sustainable practices such as renewable energy and circular economy can help reduce environmental harm. Innovation in eco-friendly technologies and global collaboration can address climate challenges. Furthermore, raising awareness and taking personal responsibility, like recycling and supporting sustainable brands, are vital steps.

Technology has increased connectivity and efficiency, but its environmental impacts are a matter of concern. Humanity can continue to innovate responsibly by prioritizing sustainability, thereby ensuring that progress is aligned with preserving the planet for future generations.

-Lakshmikant Shukla
(221B220)

Wind as Breeze

Seasons come fast and slow
What never stops is your flow,
Life and death you fairly enjoy
Shaping my world as you create and destroy.

In this clever world
selfish-love is everywhere sold,
For you're loved, When fiery days on their peak
And hated on winter nights cold and bleak.

When you've been in every direction
Seen both death and resurrection
But the love is nowhere to find
Look into my eyes; and since they're blind,

Can't see your destructive flow.
So enter my heart silent and slow
For my heart sees what eyes can't
Finds the peace, in your chaos no-one want.

-Vikram Pratap Singh
(221B443)

YET AGAIN

And again she walked out on the streets
Those dirty eyes staring her
She was undressed on the streets
Yet again, she was the victim

That short skirt that was blamed
And nobody saw those teary eyes
That raged her whole body
Yet again, a mother was abused
For not teaching her daughter,
the sense yet again
Yet again, the culprit laughed
His thirst was fulfilled
Yet again, he was free
Yet again, she was suppressed
Yet again

-Asmi Gupta
(241B053)

JEAN-JACQUES FAVIER: A PIONEER IN MICROGRAVITY RESEARCH

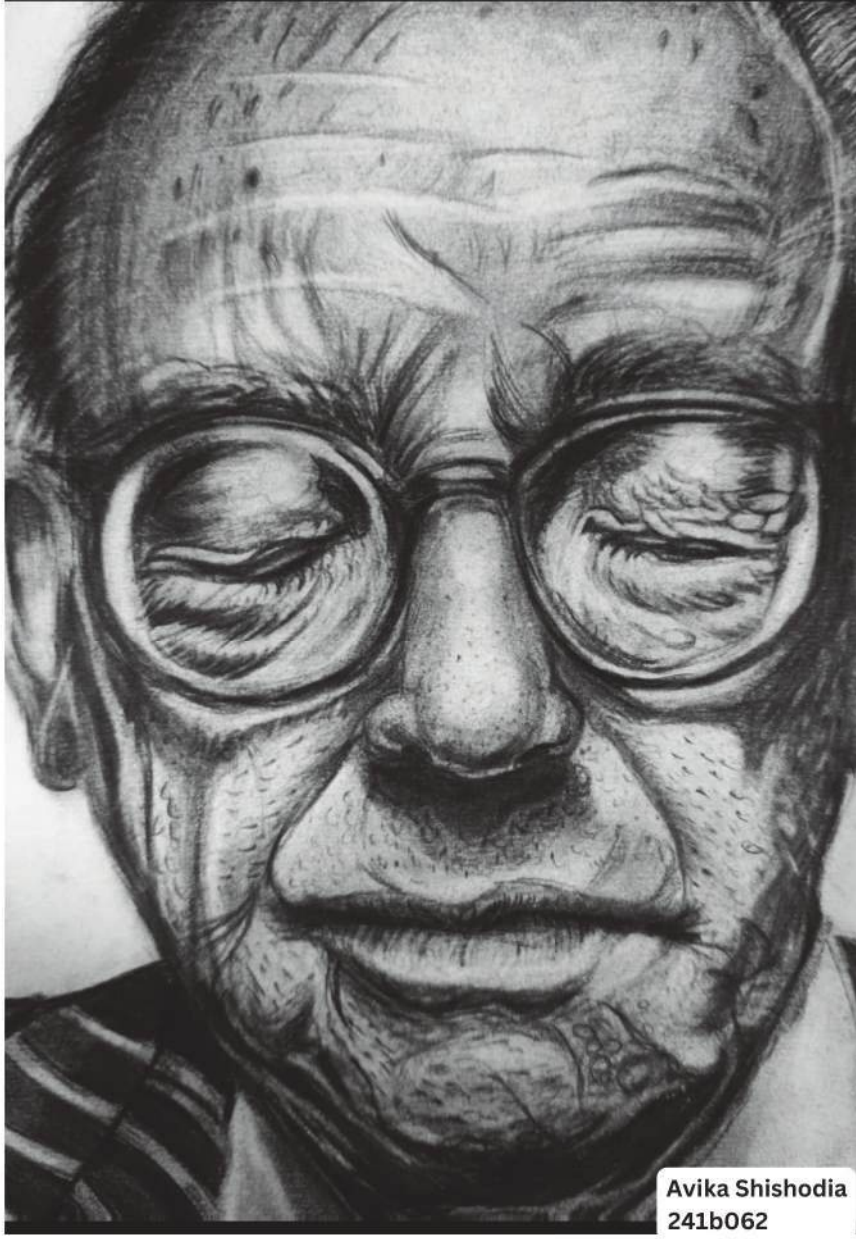
Jean-Jacques Favier was a distinguished French astronaut and scientist who played a crucial role in space research. Born in 1949, Favier pursued a career in engineering and physics before becoming an astronaut with the French space agency CNES. His most notable achievement was participating in NASA's STS-78 mission aboard the Space Shuttle Columbia in 1996.

During this mission, which lasted nearly 17 days, Favier worked as a payload specialist, conducting experiments in the Spacelab module. These studies were instrumental in advancing knowledge about how materials behave in space and contributed to the development of technologies for future space missions.

Jean-Jacques Favier's legacy is a testament to the importance of international collaboration in space exploration and scientific discovery.

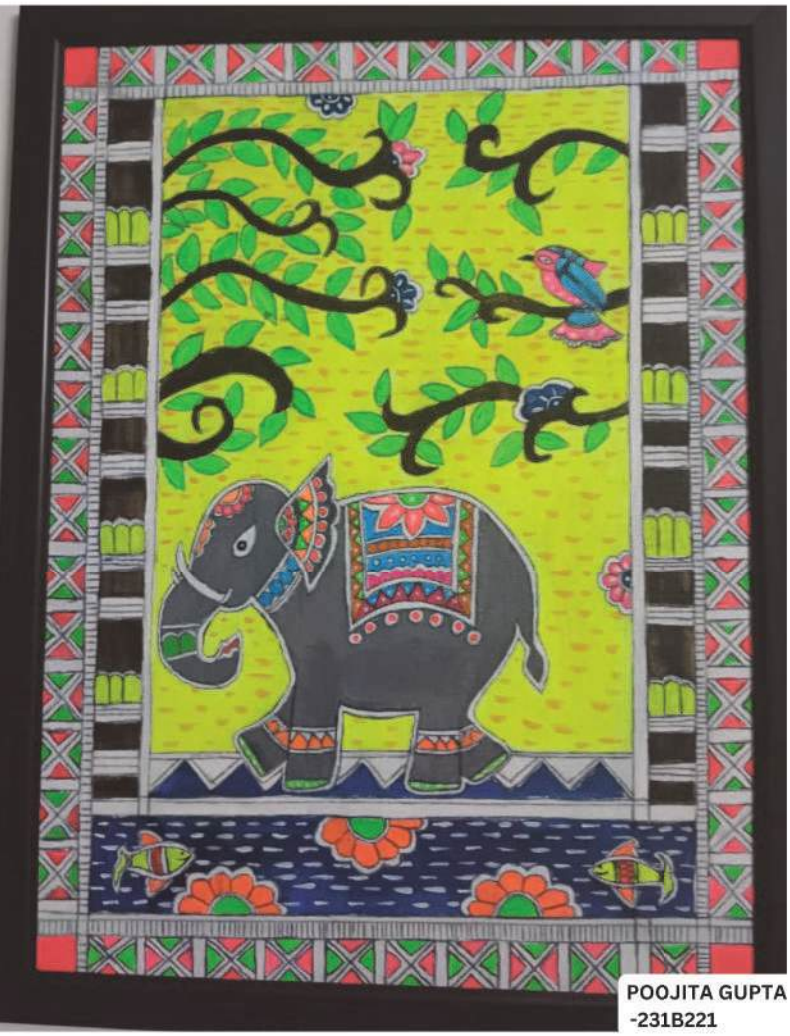
Jean-Jacques Favier passed away on March 19, 2023, at the age of 73. His legacy continues to inspire advancements in space exploration and microgravity research.

Maitreyi Gaur
-241b139

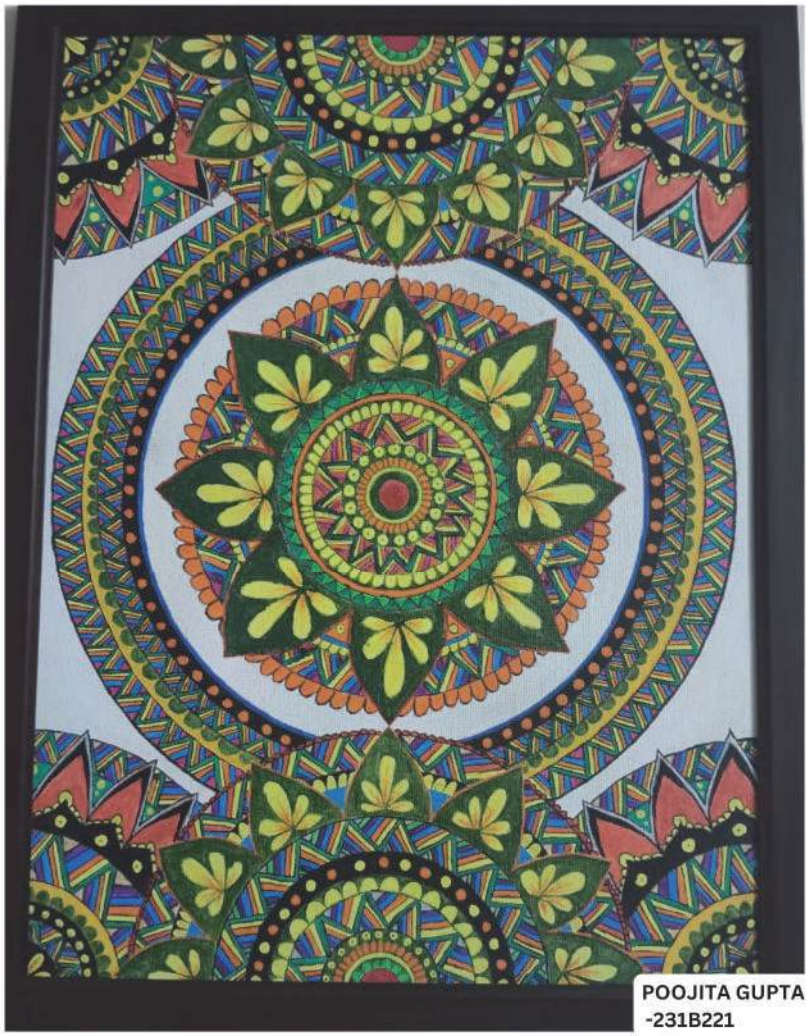


Avika Shishodia
241b062

-Nandini Kaushik
(241B155)



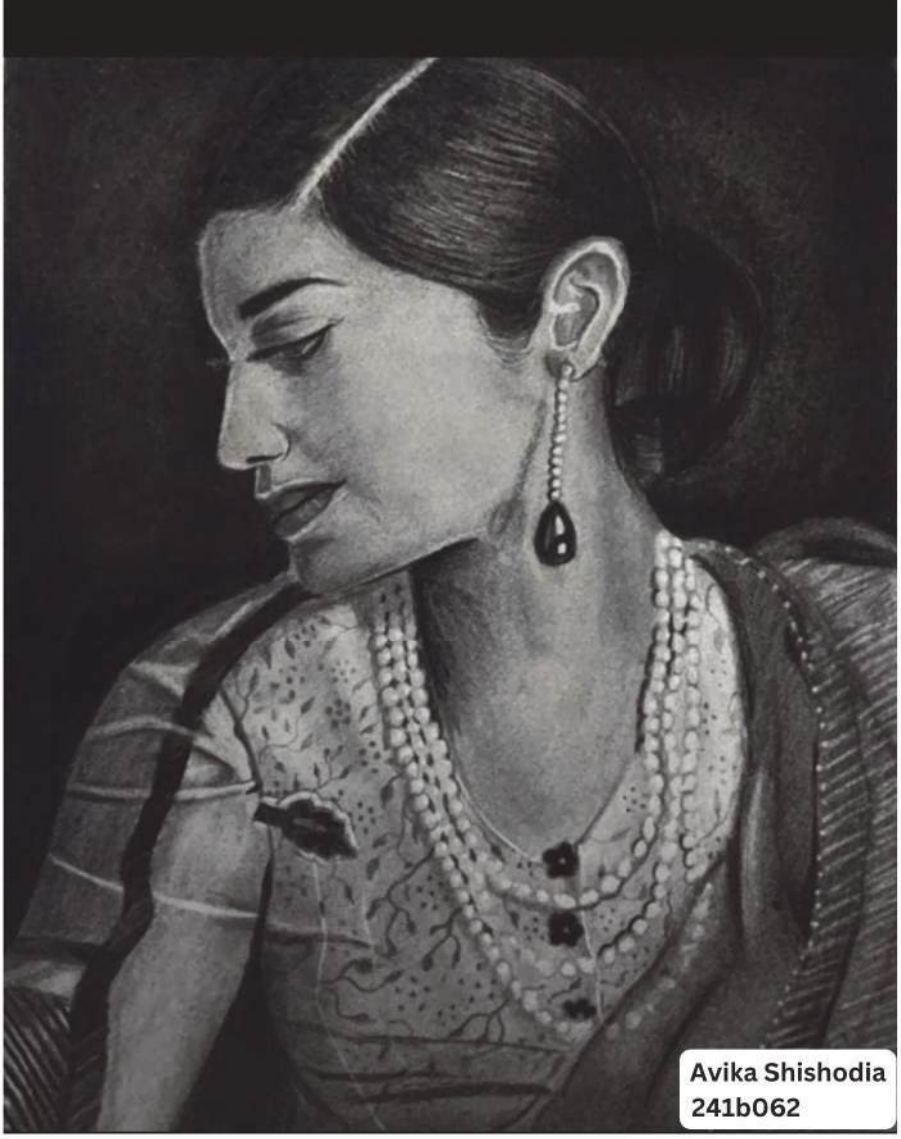
POOJITA GUPTA
-231B221



POOJITA GUPTA
-231B221

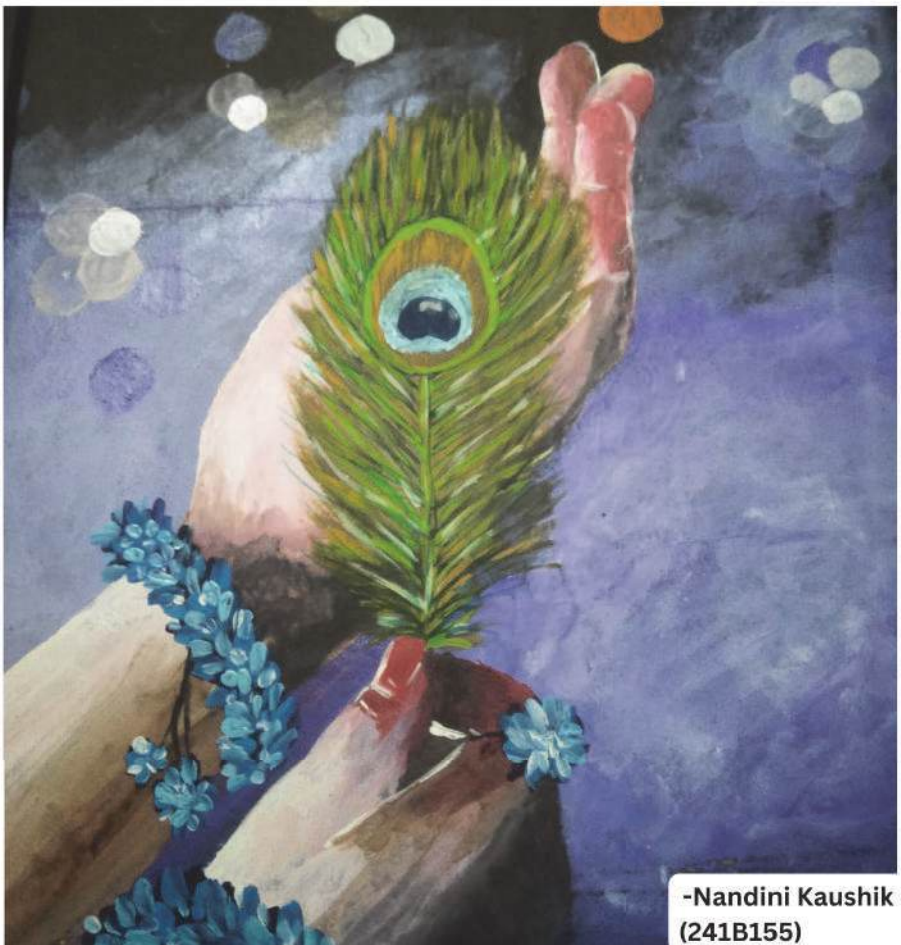
-Sheetal kushwaha
(241B238)

Arpita Rai
231b064



Avika Shishodia
241b062

Avika Shishodia
241b062



-Nandini Kaushik
(241B155)

YOUTH PARLIAMENT

FRESHERS '24

D'equinox'24

CULTURAL EVENTS

D'equinox'24

JUET YOUTH CLUB

Editorial Team

We hope that our hardwork and efforts payed off well.
This magazine is not just few articles, sketches or photos but in truest form a full pakage of unsaid emotions.
Its a request to all the readers to share love and harmony with everyone around. Its upto us. With the power of expressing ourselves, we are the ones responsible for a better future.

THANK YOU FOR READING

JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY

juet

विद्या तत्व ज्योतिसम: