

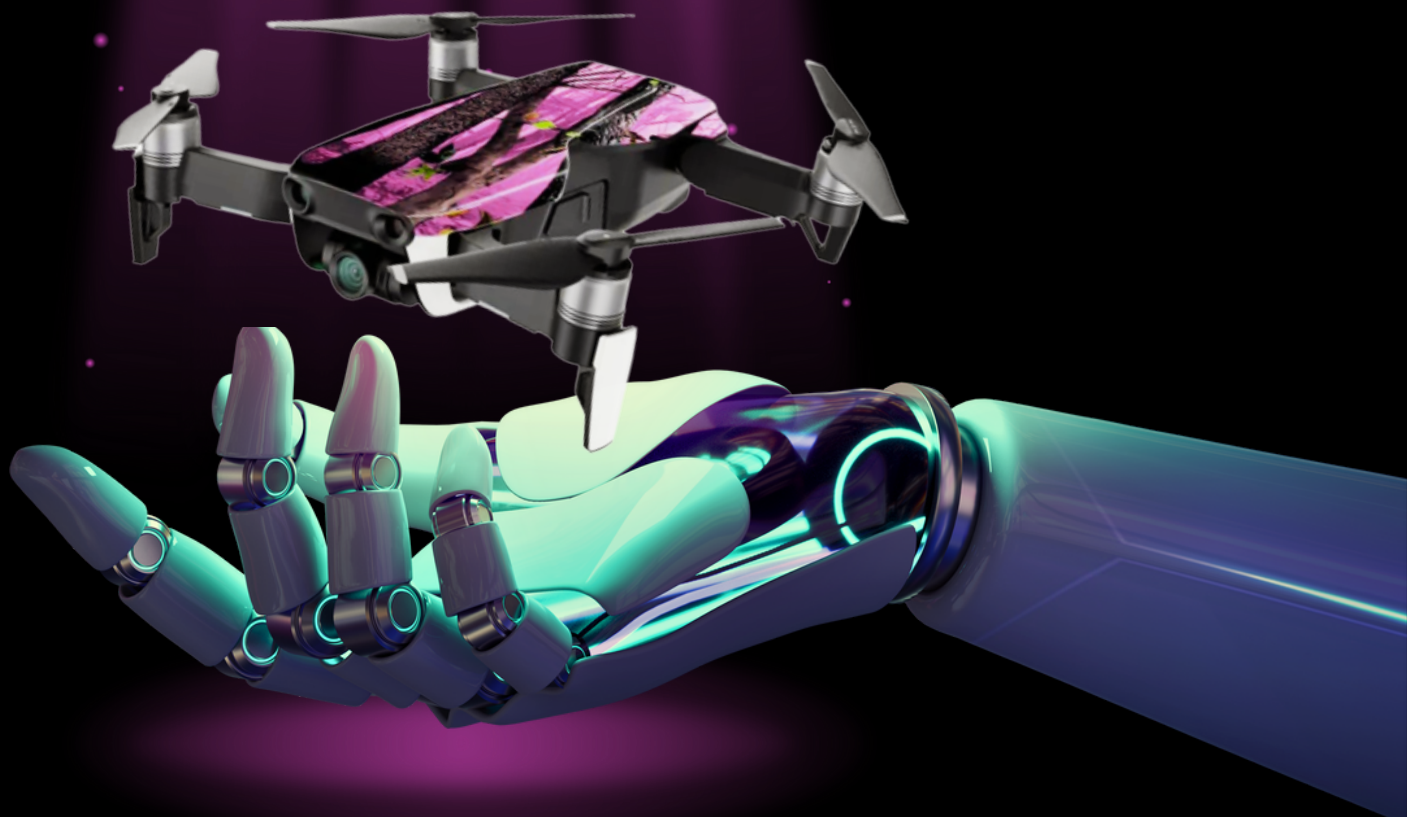
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ITANIUM

DEPARTMENT OF INFORMATION &
TECHNOLOGY

**SPECIAL EDITION : AI BASED
DRONES APPLICATION**



IMS Engineering College, Ghaziabad

NAAC Accredited & NBA Accredited Programme
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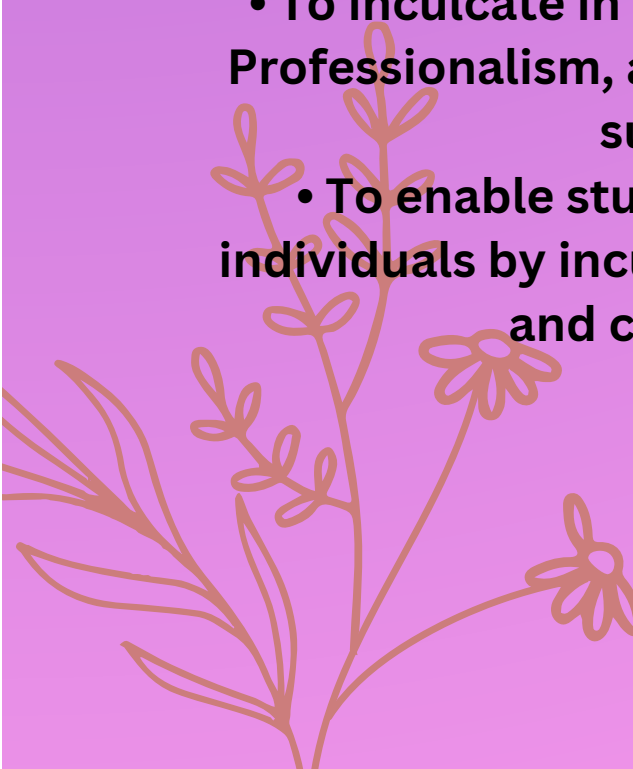
Vision and Mission of the Institute and Department



Vision of the Institute

“To make IMS EC a leading and continuously evolving educational institution that provides a transformative learning experience for its students to become global leaders and also engage all stakeholders in the process of achieving its goals.”

Mission of the Institute

- To imbibe in the students of IMSEC a desire for lifelong learning.**
 - To develop and use pedagogy based on participative and experiential learning.**
 - To undertake research, projects and consultancy assignments.**
 - To inculcate in its students the qualities of Leadership, Professionalism, and Technical Competence for achieving sustainable development.**
 - To enable students to become socially responsible individuals by inculcating in them a sense of human values and concern for the environment.**
- 

Vision of the Department



To provide globally competent professionals in the field of Computer Science & Engineering embedded with sound technical knowledge, aptitude for research and innovation with ethical values to cater to the industrial & societal needs.

Mission of the Department

M1: To provide quality undergraduate education in both the theoretical & applied foundations of Computer Science Engineering.

M2: Conduct research to advance the state of the art in Computer Science & Engineering and integrate the research results as innovations.

M3: To inculcate team building skills and promote life-long learning with high societal and ethical values.



Program Specific Outcomes (PSOs)

PSO1: To apply standard software engineering practices & strategies in real-time software project development

PSO2: To apply latest programming languages in creating innovative career opportunities.

Program Educational Objectives (PEOs)

Graduate Will:

PEO1: Possess knowledge to enable continued professional development.

PEO2: Engage in life-long learning to foster personal & organization growth.

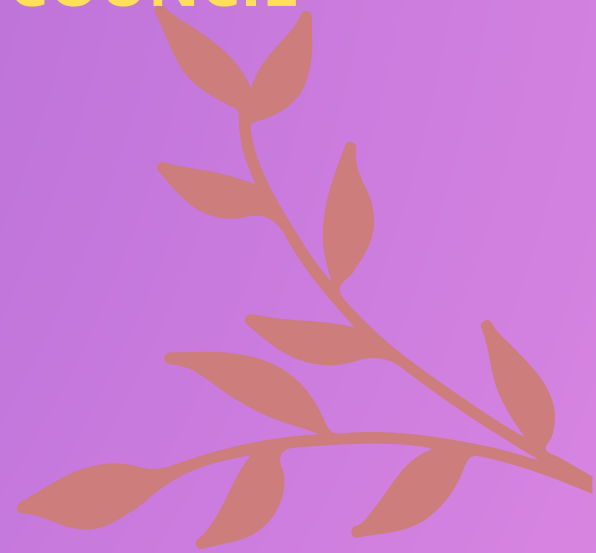
PEO3: Work productively as successful professionals in diverse career paths.

PEO4: Effectively communicate ideas to promote collaboration in accordance with societal standards & ethical practices.

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We are in the midst of a revolution. The nation is basking in the glory of a new proud generation that is taking the world by storm!

The entire intellectual community of the world has woken up to the reality that India is a treasure-house of talent and intelligence. The youth of today are taking India to unparalleled heights of prosperity. My best wishes to the publishing team of ITanium, an e-Magazine of Department of Information Technology.

-Dr. Vikram Bali

HOD'S Message



The Department of Information Technology, now NBA accredited, is working hard to accommodate the ever varying aspirations of the younger generation because of increasingly changing demand and development in industries. We are putting our efforts to accommodate these aspirations by fine tuning the teaching learning process and with many other developmental activities.

Our goal is to maintain excellence in education and to get global recognition. It may sound idealistic, but this is precisely our long term goal. It is what motivates the work of everyone in the department. It inspires our teaching and research. It is this goal which fuels the faculty members to excel.

Our University results and placement speaks about our excellence with many of our students bringing laurel to the college by getting highest ranking in university exams and huge number of students are placed in national & multinational companies, moreover our students' creativity and determination is evident by this continuous success in various fields.

-Dr. S N Rajan

"QUOTABLE QUOTES"

"If life were predictable, it would cease to be life and be without flavor."

— Eleanor Roosevelt

"Go confidently in the direction of your dreams! Live the life you've imagined."

— Henry David Thoreau

"Love the life you live. Live the life you love."

— Bob Marley

"Always bear in mind that your own resolution to success is more important than any other one thing."

— Abraham Lincoln

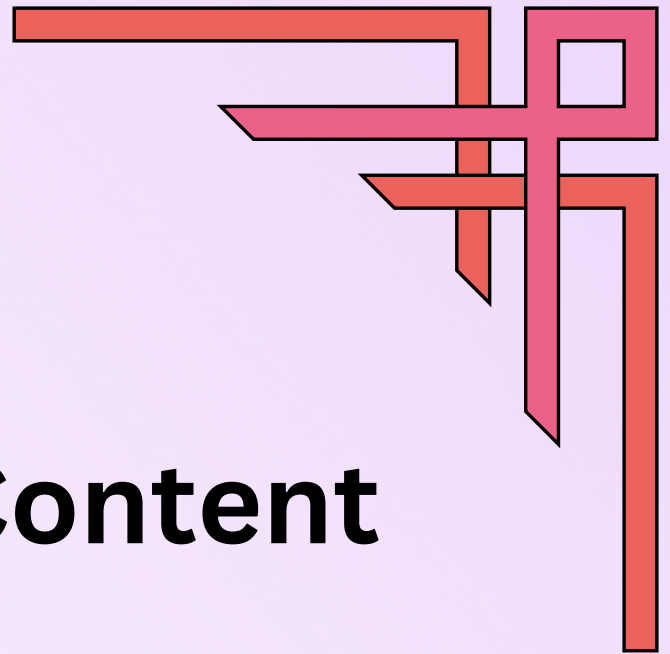
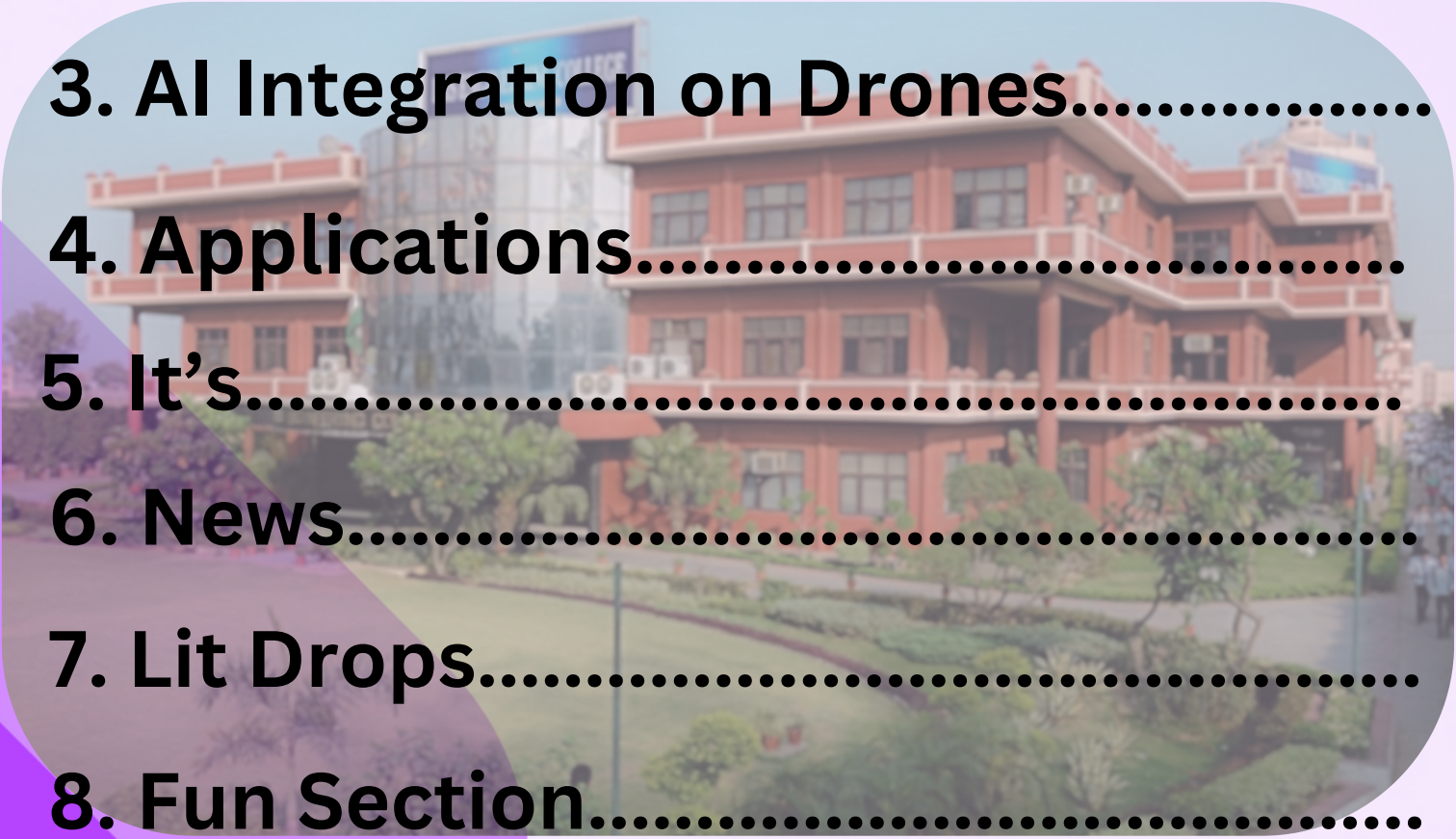


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INTRODUCTION

- **Introduction**
- **Types**
- **Major Component**
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- **Pros & Cons**



DRONES

Introduction

- Since the media uses the term "drone," it is the one that the general public is most familiar with. The term "drone" in English originally referred to a male bee. The word drone is also frequently used in various languages, including French, German, Italian, Spanish, Russian, and Dutch, but it is occasionally written slightly differently (dron in Spanish, дрон in Russian, Drohne in German).
- Many people still associate the term "drone" with military applications, which is where it originated. According to Clarke (2014), the US Navy coined the name "drone" in 1935.³¹ Drones' military connotation is gradually fading, and they are now more often connected to domestically utilized civil drones. Accordingly, the images associated with the word drone are slowly shifting from a military unmanned airplane flying above Afghanistan to a small helicopter, usually equipped with a camera, that is remotely controlled by a smartphone.
- The term drone includes unmanned airplanes and helicopters, but usually does not include unmanned balloons, unmanned flying platforms, rockets and unmanned jetpacks. The term drone is not used in any kind of legislation.
- A drone, formally known as an Unmanned Aerial Vehicle (UAV) or Unmanned Aircraft System (UAS), is an aircraft that operates without a human pilot on board. Instead, it is remotely controlled by a human operator or, in some advanced cases, can fly autonomously using pre-programmed flight paths or artificial intelligence.
- Drones are available in a variety of sizes and forms, from compact, light quadcopters to bigger fixed-wing aircraft. They have a range of sensors and systems installed, but the most popular ones are cameras. These include thermal imaging cameras, high-resolution cameras, and more specialist devices like LiDAR, multispectral cameras, and gas detectors. These sensors have a variety of uses, including as monitoring environmental conditions and taking pictures for data collecting or surveillance.

Types

- The type of drone is an important technical aspect of drones. The two primary types of drones are fixed-wing systems and multirotor systems. These two categories include most drones now in use. There is also a brief discussion of other systems, such as ornithopters and hybrid systems.

Fixed-Wing Systems



- Fixed-wing is a term mainly used in the aviation industry to define aircraft that use fixed, static wings in combination with forward airspeed to generate lift. Examples of this type of aircraft are traditional airplanes, kites that are attached to the surface and different sorts of gliders like hang gliders or paragliders.
- Even a simple paper airplane can be defined as a fixed-wing system. An example of a fixed-wing drone is the widely used Raven, which will be discussed in more detail later in this section

Multirotor Systems

Multirotor systems are a subset of rotorcraft. The term rotorcraft is used in aviation to define aircraft that use rotary wings to generate lift. A popular example of a rotorcraft is the traditional helicopter. Rotorcraft can have one or multiple rotors. Drones using rotary systems are almost always equipped with multiple small rotors, which are necessary for their stability, hence the name multirotor systems. Commonly, these drones use at least four rotors to keep them flying.

A popular example of these multirotor drones is the widely used Phantom drone made by the Chinese company DJI.

This four-rotor drone will be discussed in more detail later in this section. Differences between fixed-wing drones and multirotor drones are important for the different applications consumers want to use the drone for. For example, multirotor drones do not need a landing strip, make less noise than their fixedwing counterparts and can hover in the air. Fixed-wing drones can fly faster and are more suitable for long distances than their multirotor counterparts. These characteristics determine which of these drone types to use for a specific application.



Other Systems

- Some types of drones cannot be labeled as a fixed-wing or a multirotor drone. Sometimes because the drone simply is neither fixed-wing nor multirotor, sometimes because the drone has characteristics of both types.
- Hybrid systems are systems that have characteristics of both multirotor and fixed-wing systems. The hybrid quadcopter is an example of such a drone.¹ This drone uses multiple rotors to take-off and land vertically but also has wings so it can fly longer distances. Drones that are neither fixed-wing nor multirotor systems are far less frequent. An example of such a drone is the ornithopter.
- These drones fly by mimicking wing motions of insects or birds. Most of these ornithopters are scaled to the birds or insects they represent. These small drones are mostly still under development and are not widely used in practice.
- Examples of ornithopters include the Delfly explorer,² a drone that mimics a dragonfly, and the micromechanical flying insect,³ a drone under development that is eventually going to represent a fly both in size and movement

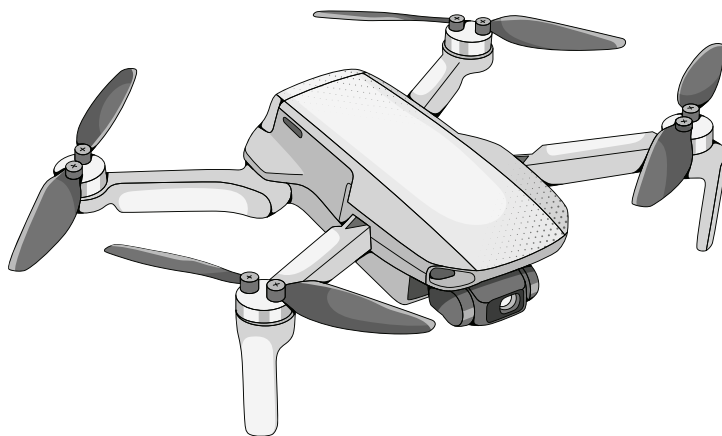
Major Components

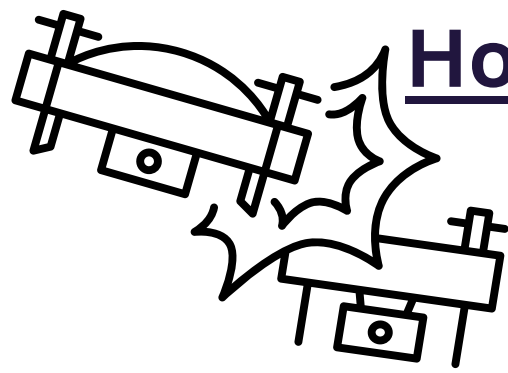
The major components of a drone are essential for its functionality and flight. These components typically include:

1. **Frame**: The frame serves as the structural foundation of the drone, holding all other components together. It can be made from various materials like carbon fiber, aluminum, or plastic, depending on the drone's design and purpose.
2. **Motors**: Drones typically have four or more electric motors, each connected to a propeller. These motors provide thrust to lift and maneuver the drone in the air.
3. **Propellers**: Propellers generate lift and control the drone's movement. They come in pairs (rotor pairs) and vary in terms of size, pitch, and number of blades.
4. **Electronic Speed Controllers (ESCs)**: ESCs are connected to the motors and regulate the speed and direction of each motor. They receive commands from the flight controller to adjust motor speed, which influences the drone's flight.
5. **Flight Controller**: The flight controller is the "brain" of the drone. It processes data from various sensors, user inputs, and control algorithms to stabilize and control the drone's flight. It typically contains a microcontroller, sensors (gyroscope, accelerometer, magnetometer), and sometimes a GPS module.
6. **Battery**: Rechargeable lithium-polymer (LiPo) or lithium-ion (Li-ion) batteries provide power to the motors, flight controller, and other electronic components on the drone.
7. **Remote Controller (Transmitter)**: The remote controller, operated by the pilot, sends commands to the drone. It usually includes joysticks or other input methods to control throttle, direction, and other functions.
8. **Receiver**: The receiver on the drone receives signals from the remote controller and relays them to the flight controller, allowing the drone to respond to pilot commands.

How Does a Drone Work?

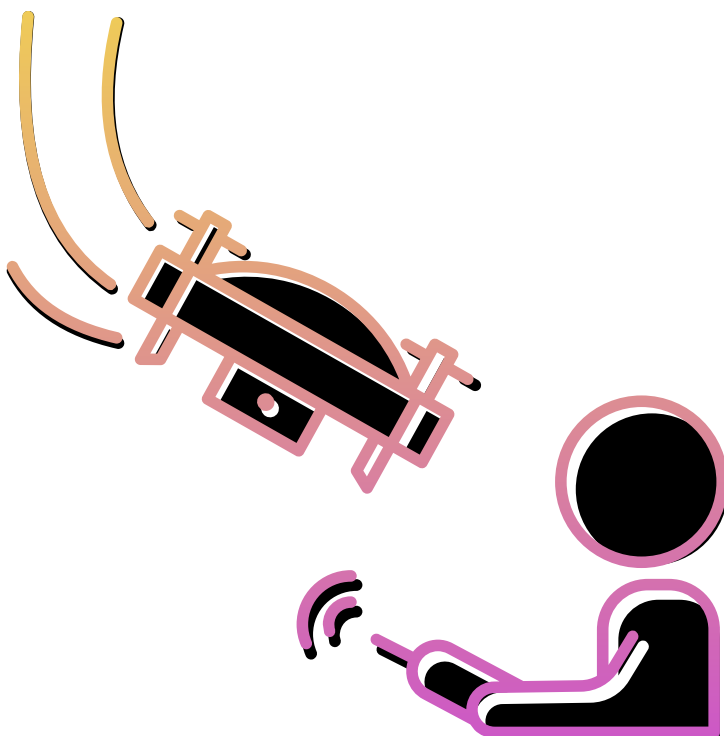
- The working procedure of a drone may appear simple to most of you but the device is actually carrying a complex technology inside. Before we discuss the concept of drones' working you must know the fact that differentiate between drones and its ancestors- helicopters.
- The former one can fly independently whereas later needs pilot for directions.
- Actually, it is a specially designed multi propeller system inside a drone that makes this device highly independent and also assists in reduction of failures. One important thing to note about this multi propeller system is that even if any motor inside this device stops working; it will keep on flying as it gets support from propellers that are working in group.
- Drones that possess large number of motors inside are able to gain more control over their elevation and hence can carry more loads during flight.
- These propellers get their power from a dedicated source and most of these devices contain removable batteries so that it can stay in air for long run. The flight time can be extended with use of powerful batteries in design.





How does it fly?

- The controller is a crucial part of the drone flight system. Experts utilize this equipment to manage every aspect of a drone's movement, including launching, navigating, and landing. These days, the market is overflowing with many controller options, and developers frequently use these to explore and build drones with amazing capabilities.
- The major task of a controller is to establish proper communication channel between remote unit and the radio waves. Most of the drones use to work on 2.4 GHz frequency range and many of these controls take help from Wi-Fi networks for making active decisions regarding movements. Many features of a smartphone and drone are same as like both carry GPS, Wi-Fi and many other common sensor units.
- These onboard sensors help drone to stay in air for long run and make right decisions about its height, direction and other important movements. The landing process is also controlled by propeller system inside and the sensors make decisions about its speed, altitude and motor rotation etc.
- A drone works like an intelligent air unit that can cover large distance when used with powerful batteries and can bring the hidden information for you like a spy. This is the main reason behind its popularity in military applications.



Pros:

- **1. Autonomous Operation:** AI enables drones to fly autonomously, making real-time decisions based on the data they receive. This independence can be critical for duties like surveillance, search and rescue, and monitoring.
- **2. Efficiency:** AI-powered drones can analyze data and make judgments more swiftly than human operators. This can boost the efficiency of tasks like data collecting, inspection, and mapping.
- **3. Improved Navigation:** AI algorithms can help the drone navigate complex settings, avoid obstacles, and optimize its course for greater coverage.
- **4. Object Recognition:** AI can help with advanced object recognition and tracking, allowing drones to recognize and track specific objects or people. This is beneficial in applications such as wildlife monitoring, vehicle tracking, and security.
- **5. Data Analysis:** AI can process large amounts of data collected by drones, extracting valuable insights and patterns. This is particularly useful in fields like agriculture, where drones equipped with AI can analyze crop health and recommend actions.

Cons:

- **1. Cost:** Implementing AI in drones can increase their overall cost. The development, integration, and maintenance of AI systems may require significant financial investment.
- **2. Complexity:** AI integration adds complexity to drone systems. This complexity can lead to increased chances of technical failures, which may require specialized skills for troubleshooting and maintenance.
- **3. Security Concerns:** AI-powered drones may be susceptible to hacking or misuse. Ensuring the security of the AI algorithms and the communication between the drone and its control system is crucial to prevent unauthorized access.
- **4. Limited Adaptability:** AI systems in drones are typically designed for specific tasks. Adapting drones to new or unexpected situations may be challenging, and they might struggle to handle scenarios they were not explicitly trained for.

Guidelines

- **New Drone Rules for 2023**
- **Guidelines in India State-**
- **Specific guidelines on Specific days**

New Drone Rules for 2023 and Key Changes

- The Indian government has announced new drone rules that will come into effect from January 1, 2023. These rules are aimed at promoting the usage of drones in various sectors while ensuring safety and security.
- Drone registration will be mandatory for all drones, except those in the nano category (weighing less than 250 grams).
- 97 Remote pilot licenses will be required for all drone pilots, regardless of the weight category of the drone.
- Drone manufacturers will have to comply with certain safety standards and obtain certifications for their products.



Drone Guidelines in Countries

- **India**

In India, the Civil Aviation Ministry has issued guidelines for the use of drones, which include restrictions on flying over sensitive areas such as airports, military installations, and government buildings. The guidelines also require drone operators to obtain a license and follow safety and security protocols.

भारत 2023 INDIA

वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

- **Other Countries**

Other G20 countries have also implemented guidelines for the use of drones, with varying levels of restrictions and safety measures. For example, in the United States, the Federal Aviation Administration (FAA) has established regulations for the use of drones, including requirements for registration and pilot certification. In Japan, the Ministry of Land, Infrastructure, Transport, and Tourism has issued guidelines for the use of drones in various industries, including agriculture and construction.

GUIDELINES

Introduction to Drone Guidelines

Drones have become increasingly popular in recent years, with applications ranging from aerial photography to delivery services. However, with the rise in drone usage comes the need for regulations and guidelines to ensure safety and security.

- In India, the government has implemented various guidelines for drone usage, including state-specific guidelines and recent updates.

- **Government Guidelines for Drone Usage**

- In 2018, the Indian government released the Civil Aviation Requirements (CAR) for Remotely Piloted Aircraft Systems (RPAS), which outlines the rules and procedures for drone usage in the country.

These guidelines include requirements for drone registration, pilot training and certification, and airspace restrictions. The CAR also classifies drones based on their weight and intended usage, with different regulations for each category.

Guidelines on events and special days

Guidelines for Drone Usage on January 26th

Restrictions and Regulations On January 26th,

- All drone usage in the G20 area will be restricted and subject to regulations. This includes a ban on flying over government buildings, airports, and other sensitive areas.
- Additionally, all drones must be registered with the local authorities and carry a valid license plate. Pilots must also be licensed and follow all safety guidelines and regulations.
- Violations of these restrictions and regulations may result in fines and legal action.

Guidelines for Drone on August 15th

Digital Sky Platform

- The Digital Sky Platform is an online platform for drone operators to register their drones and obtain permission for flying in controlled airspace. The platform was launched on August 15th, 2018.

No Permission, No Takeoff

The new guidelines require all drone operators to obtain permission from the Digital Sky Platform before flying. If permission is not obtained, the drone will not be allowed to take off.

New Categories of Drones

- The new guidelines introduce two categories of drones nano and
- micro. Nano drones are those that weigh less than 250 grams,
- while micro drones weigh between 250 grams and 2 kilograms.



Government Guidelines for Drone Usage

Digital Sky Platform

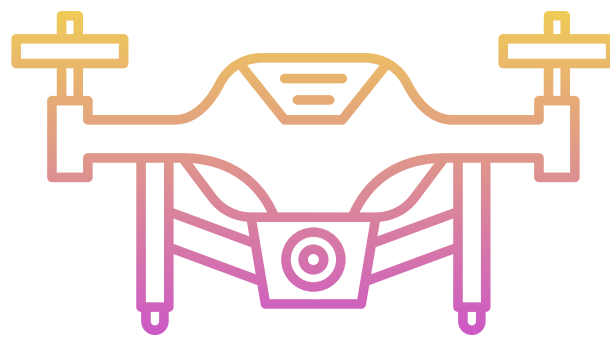
The Digital Sky Platform is a national unmanned traffic management (UTM) system that provides a platform for drone registration, pilot registration, and airspace management.

Registration and Certification

All drones must be registered and certified by the Directorate General of Civil Aviation (DGCA) before they can be operated in India.

Restricted Areas

Drones are not permitted to fly within 5 kilometers of any airport, military installation, or other restricted areas.



~~State-Specific Drone Guideline~~

- Drone guidelines in India vary from state to state. It is important to be aware of the specific regulations in your state before operating a drone.

- **Example State-Specific Guidelines**

- In Maharashtra, drones cannot be flown within 3 km of any military installation or airport without prior permission from the authorities.

- In Tamil Nadu, drones can only be operated during daylight hours and must not exceed a height of 200 feet.



~~Artificial Intelligence~~ ~~Integration in Drones :~~

Autonomous Navigation: AI algorithms enable drones to navigate autonomously, avoiding obstacles, and adapting to changing environments. This is crucial for tasks such as surveillance, mapping, and search and rescue.

Object Detection and Recognition: Drones equipped with AI-powered computer vision systems can detect and recognize objects in real-time. This capability is valuable in applications like agricultural monitoring, wildlife conservation, and security.

Path Planning and Optimization: AI algorithms help in optimizing flight paths based on specific objectives. Drones can dynamically adjust their routes to achieve optimal coverage, efficiency, and safety in various missions.

Data Analysis and Interpretation: AI enables drones to analyze the data they collect, extracting meaningful insights. For instance, in agriculture, drones equipped with AI can analyze crop health, identify diseases, and optimize irrigation strategies.

Swarm Intelligence: AI facilitates the coordination of drone swarms, enabling them to work together efficiently. Swarm intelligence is particularly useful in scenarios such as disaster response, where multiple drones can collaborate to cover large areas quickly.

Machine Learning for Improving Performance: Drones can be trained using machine learning algorithms to improve their performance over time. For example, machine learning can be applied to enhance the precision of delivery drones or improve the accuracy of surveying missions.

Communication and Collaboration: AI plays a role in enhancing communication capabilities among drones and between drones and ground stations. This is vital for coordinated missions and maintaining a reliable connection in challenging environments.

Security and Anomaly Detection: Drones with AI-powered systems can identify anomalous behavior or potential security threats. This is valuable in surveillance and critical infrastructure protection.

Energy Efficiency: AI can optimize the energy consumption of drones by adjusting flight ~~parameters~~ based on real-time conditions. This contributes to longer flight times and improved overall efficiency.

Adaptive Systems: Drones with AI can adapt to changing conditions, weather patterns, or unexpected events. This adaptability is crucial for missions where environmental factors play a significant role.

ITALIANS VIEW

- Faculty
- Alumni
- Student

**Article By Mr.Chirag
Bhardwaj
(Assistant Professor) IT
Department**



AI-Based Drone Applications: Revolutionizing Industries

Drones, originally conceived for military purposes, have swiftly transcended their initial constraints to become indispensable tools in various commercial and civilian applications. With the integration of Artificial Intelligence (AI), these unmanned aerial vehicles have further elevated their utility and expanded their scope of use across diverse sectors. From enhancing efficiency in agriculture to improving surveillance and delivery services, AI-powered drones have revolutionized industries in unprecedented ways.

One of the most notable applications of AI-enabled drones is in agriculture. These drones, equipped with advanced imaging sensors and AI algorithms, can assess crop health, monitor growth patterns, and identify areas requiring attention. By collecting and analyzing data in real-time, they enable farmers to make informed decisions, leading to optimized crop yields and resource management. Additionally, these drones aid in precision agriculture by precisely spraying fertilizers and pesticides, minimizing wastage and environmental impact.

In the realm of infrastructure and construction, AI-powered drones play a pivotal role in surveying and monitoring. They can efficiently inspect buildings, bridges, and other structures, identifying potential issues such as cracks or structural weaknesses. Through AI algorithms, these drones can analyze the collected data and generate comprehensive reports, facilitating timely maintenance and reducing the risk of catastrophic failures. Moreover, in the construction phase, drones assist in monitoring progress, ensuring adherence to design specifications, and enhancing overall project management.

The logistics and e-commerce sectors have also reaped substantial benefits from AI-based drones. By utilizing AI for route optimization and obstacle detection, drones can expedite the delivery process, ensuring prompt and efficient service. This integration has streamlined last-mile deliveries, particularly in remote or geographically challenging areas, thereby revolutionizing the concept of on-demand delivery and enhancing customer satisfaction. Furthermore, AI-equipped drones have significantly transformed the field of environmental conservation and disaster management. These drones can monitor wildlife, track deforestation, and assess natural habitats, providing valuable data for conservation efforts. In disaster-prone areas, they aid in rapid assessment and response, facilitating search and rescue operations and providing crucial insights for disaster management authorities.

Despite the numerous advantages, the widespread adoption of AI-powered drones also raises concerns regarding privacy, security, and regulatory frameworks. Striking a balance between harnessing the potential of AI-based drones and addressing associated challenges remains a critical task for policymakers and industry stakeholders.

In conclusion, the integration of AI technology in drone systems has ushered in a new era of innovation and efficiency across various sectors. As AI continues to advance, the capabilities of these drones are expected to further evolve, offering unparalleled solutions to complex challenges and reshaping industries for a more sustainable and interconnected future.

**Article By Mr. RajGopal
Mishra**
(Assistant Professor)
IT Department



Title: Revolutionizing Skies: The Rise of AI-Based Drone Applications

Unmanned aerial vehicles (UAVs), more commonly known as drones, have become integral players in various industries, thanks to the integration of artificial intelligence (AI) technologies. These AI-based drone applications are ushering in a new era of efficiency, precision, and adaptability, transforming the way we approach tasks ranging from surveillance and monitoring to data collection and analysis. One of the key features of these AI-powered drones is their autonomous navigation capabilities. Cutting-edge computer vision algorithms enable drones to intelligently navigate through complex environments, avoiding obstacles in real time. This not only enhances safety but also opens up possibilities for applications in areas that were once considered challenging or hazardous. Object detection and recognition are at the forefront of AI drone applications, enabling these aerial devices to identify and track specific objects or patterns seamlessly. This proves invaluable in scenarios such as search and rescue missions, environmental monitoring, and infrastructure inspections. Mission planning and management have been streamlined through intuitive interfaces that leverage AI for optimized task assignments and resource utilization. Users can easily define waypoints and objectives, allowing drones to autonomously plan and execute missions with unprecedented efficiency. Real-time monitoring is taken to new heights with live video streaming and AI-driven anomaly detection. Operators receive immediate feedback during missions, enhancing situational awareness and response times. The ability to adapt to changing conditions ensures the success of dynamic and evolving missions. AI-based analytics are transforming data collection into actionable insights. Drones equipped with machine learning algorithms can analyze images, videos, and sensor readings on board, reducing the need for extensive post-processing. This not only saves time but also facilitates real-time decision-making. Security and privacy considerations are paramount. These applications implement robust security measures to prevent unauthorized access, and privacy features ensure compliance with regulations. Integration with GPS, GIS, and IoT devices enhances positioning accuracy and provides a comprehensive view of the operating environment. The user interface is designed with both novice and experienced operators in mind, providing a seamless experience for mission planning, monitoring, and analysis. Furthermore, adaptive learning capabilities enable drones to continually improve their performance over time, learning from each mission to enhance efficiency and effectiveness. In conclusion, AI-based drone applications are poised to revolutionize industries, providing innovative solutions to age-old challenges. As these technologies continue to evolve, the skies are no longer just a canvas for flight; they are becoming a dynamic space where artificial intelligence and drones work in harmony to redefine what is possible.

Gaurav Kumar Assistant Professor



Elevating Efficiency: The Impact of AI on Drone Applications

In the realm of unmanned aerial vehicles, the fusion of artificial intelligence (AI) and drone technology has given rise to a transformative era of unparalleled capabilities. AI-based applications have revolutionized the functionalities of drones, enhancing their autonomy and expanding their range of applications across diverse sectors.

The incorporation of AI has bestowed drones with autonomous navigation capabilities, allowing them to navigate complex terrains and adapt to dynamic environments without human intervention. This newfound autonomy is particularly evident in scenarios like search and rescue missions, where drones equipped with AI algorithms can swiftly and efficiently maneuver through challenging landscapes.

Object recognition and tracking have become a forte of AI-powered drones, making them indispensable for surveillance and security operations. Through advanced computer vision algorithms, these drones can identify and track specific objects or individuals, providing real-time, actionable data to operators. This has proven invaluable in monitoring vast areas and enhancing security measures.

Environmental monitoring has taken a leap forward with AI-driven drones. These unmanned vehicles, armed with AI sensors, collect data on air and water quality, track wildlife movements, and contribute to climate change research. The ability to gather high-resolution, real-time data aids in informed decision-making for environmental conservation efforts.

Delivery services are undergoing a paradigm shift with the deployment of AI-driven drones. Companies are exploring the potential of drones for delivering packages to remote or inaccessible areas. AI algorithms ensure safe navigation, obstacle avoidance, and precise deliveries, transforming logistics and reshaping the future of goods transportation.

In emergency response and disaster management, AI-powered drones play a crucial role. Equipped with sensors and communication systems, these drones rapidly assess damage, locate survivors, and relay critical information to first responders. Their speed and agility make them indispensable in time-sensitive situations, aiding in swift and effective crisis management.

In conclusion, the amalgamation of AI and drone technology has ushered in a new era of efficiency and innovation. From autonomous navigation to precision agriculture and emergency response, AI-driven drones are redefining the possibilities of unmanned aerial vehicles. As these technologies continue to evolve, the collaborative synergy between AI and drones promises to unlock novel solutions and elevate the efficiency of tasks beyond our current imagination

Keshav Maheshwari
IT(2011-15)Batch
Team Leader Scrum
Master,Trig, Norway



"As an alum, my experience with the AI-based drone has been noteworthy. Its seamless integration of AI technology showcases impressive performance, ensuring precise navigation and consistent results. The user-friendly interface stands out, catering to both novices and seasoned users with intuitive controls. The drone's durable build reflects longevity, withstanding various environmental conditions.

The software capabilities enhance its versatility, providing a range of applications for different purposes. Despite these strengths, there is a notable room for improvement in battery life, which could enhance overall usability. The drone's ability to execute tasks efficiently, coupled with its potential for various applications, makes it a valuable tool. With a focus on addressing battery concerns, this technology has the potential to become even more indispensable in the field of AI-driven drones."

The user-friendly interface strikes a harmonious balance, making it accessible to both newcomers and seasoned users with its intuitive controls. The drone's durable build stands as a testament to its robust engineering, exhibiting resilience against diverse environmental conditions. Its software capabilities amplify its versatility, unlocking a myriad of applications across industries.

**Mohan Agrawal IT(2011-
15)Batch
Technical Program Manager,**



"As a fellow alum, my colleague's experience with the AI-based drone is noteworthy. The drone's integration of AI technology showcases impressive performance, ensuring precise navigation and consistent results. The user-friendly interface stands out, catering to both novices and seasoned users with intuitive controls. The durable build reflects longevity, withstanding various environmental conditions.

The software capabilities enhance its versatility, providing a range of applications for different purposes. However, there's notable room for improvement in battery life, which could enhance overall usability. Despite this, the drone's ability to execute tasks efficiently and its potential for various applications make it a valuable tool. With a focus on addressing battery concerns, this technology has the potential to become even more indispensable in the field of AI-driven drones."

Yet, the notable area for improvement lies in addressing battery life. While the current performance is commendable, an extended battery life would undoubtedly elevate overall usability and user satisfaction. In summary, the AI-based drone impresses with its efficiency and potential, with the promise of even greater contributions upon addressing the battery concerns."

Harsh Saraswat
IT-1 (3rd Year)



The Unfolding Tapestry of Advanced Drones:
Navigating the Technological Landscape

Introduction:

In the ever-evolving landscape of technology, drones have emerged as multifaceted tools, transcending their initial military origins. This article delves into the intricate facets of new-age drones, exploring their applications in diverse industries and addressing the challenges and ethical considerations that accompany their proliferation.

1. Precision Agriculture:

Modern agriculture embraces drone technology for precision farming. Equipped with sensors and imaging devices, drones collect real-time data on crop health, soil moisture, and pest infestations. This data-driven approach optimizes resource utilization, enhances crop yields, and promotes sustainable farming practices.

2. Logistics Revolution:

The logistics industry is undergoing a paradigm shift with the integration of drones. Companies like Amazon are exploring drone deliveries, promising faster and more efficient transport of goods. Automated landing systems and payload management innovations underscore the new age of logistical efficiency.

3. Surveillance and Security Dynamics:

Security and law enforcement agencies leverage advanced drones equipped with high-resolution cameras and thermal imaging. These tools enhance surveillance capabilities, providing a holistic view of large areas and enabling rapid responses to security threats. However, this also raises concerns about privacy and the responsible use of surveillance technology.

4. Environmental Guardians:

Drones have become indispensable in environmental monitoring. From tracking deforestation and wildlife conservation to assessing the impact of climate change, these unmanned aerial vehicles contribute significantly to our understanding of ecological systems. Their cost-effective and versatile nature makes them powerful tools in safeguarding the environment.

5. Cinematic Sky:

In the entertainment industry, drones have revolutionized cinematography. Filmmakers now employ drones to capture dynamic aerial shots, previously challenging or costly to achieve. This newfound creative freedom has transformed storytelling and visual aesthetics, ushering in a new era of cinematic possibilities.

6. Medical Logistics and Emergency Response:

The healthcare sector explores drones for medical deliveries in remote areas or during emergencies. Drones navigate challenging terrains swiftly, potentially saving lives by transporting medical supplies and organs. However, this application raises regulatory and safety considerations that demand careful attention.

7. Swarm Intelligence and Collaborative Endeavors:

Advancements in drone technology enable the coordination of drone swarms, facilitating collaborative tasks such as large-scale mapping, 3D modeling, and synchronized operations. While this heralds exciting possibilities, it also raises questions about control, safety, and potential misuse.

Challenges and Ethical Reflections:

The proliferation of drones brings forth challenges concerning privacy, security, and regulatory frameworks. Striking a delicate balance between technological innovation and ethical considerations is paramount to harnessing the positive impact of drone technology while mitigating potential risks.

Conclusion:

As the tapestry of advanced drones continues to unfold, the world stands witness to a transformative era marked by technological prowess and ethical deliberations. Embracing the potential of drones requires a nuanced understanding of their applications and a commitment to responsible innovation in this ever-changing technological landscape.



Divakar Sahu
IT-1 (3rd Year)

India's "Make in India" initiative has made substantial contributions to the field of aerial mapping by fostering indigenous development, innovation, and adoption of technology. Several key aspects showcase how India has embraced this initiative to propel advancements in aerial mapping:

Indigenous Drone Manufacturing:

Under the "Make in India" umbrella, the country has witnessed a burgeoning ecosystem for drone manufacturing. Indian companies have emerged as significant players, designing and producing drones tailored for various applications, including aerial mapping. These locally manufactured UAVs not only meet domestic demand but also cater to international markets, contributing to the global drone industry's growth.

Technology Development and Research:

Government-backed research institutions, academic collaborations, and private enterprises in India have heavily invested in research and development focused on enhancing aerial mapping capabilities. This investment has led to the creation of advanced sensors, imaging technologies, and software solutions specifically designed for mapping purposes. These innovations have significantly improved the precision and efficiency of aerial mapping operations.

Integration of Geospatial Technologies:

The "Make in India" initiative has encouraged the integration of geospatial technologies into various sectors. Aerial mapping, combined with GIS (Geographic Information System) and remote sensing technologies, has found applications in agriculture, urban planning, disaster management, and environmental conservation. This integration has led to more informed decision-making processes across these domains, driving efficiency and sustainability.

Vrinda Maheshwari
IT-1 (2nd Year)



My journey into the exhilarating world of AI-generated drones has been marked by a seamless integration of artificial intelligence into the very fabric of flight. These drones' responsiveness and adaptability demonstrate a level of sophistication that takes the flying experience to new heights. Each feature, from intelligent obstacle avoidance to advanced camera stabilization, contributes to an immersive and technologically rich flying experience that goes beyond the capabilities of conventional drones. Looking ahead, I am excited about the untapped potential and future advancements in AI-generated drones. The prospect of seeing further refinement and expanded applications fuels my desire to stay on the cutting edge of this evolving technology. In conclusion, my experience with AI-infused drones has demonstrated the transformative power of innovation. My experience reflects the promise of a future where the skies are not just explored but enriched by the intelligent wings of AI-generated drones

Divya Bhardwaj
IT-2 (2nd Year)



The use of artificial intelligence in drone technology has proven to be a game-changer in its constantly changing field. As an IT enthusiast investigating the world of artificial intelligence-generated drones, I'm fascinated by the previously unimaginable possibilities these technological wonders present. Drones created by AI appear to have countless uses. These drones are remarkably versatile; they can perform tasks like precise data collection and efficient surveillance operations. It's especially exciting to consider how the technology might transform sectors like emergency services, logistics, and agriculture. In summary, the fusion of AI and drone technology heralds a revolutionary new era in technological advancement. The journey into this unexplored territory promises excitement, advancement, and a glimpse into the endless possibilities that lie ahead as we navigate the ethical and legal considerations.

Abhijeet Dubey
IT-2 (2nd Year)



My research into AI-integrated drones has provided me with a nuanced viewpoint. Despite remarkable technological advances, there are significant reservations that must be addressed. The high cost of AI implementation raises concerns about accessibility and practicality on a larger scale. Security flaws, particularly vulnerability to hacking, pose significant risks. Ethical quandaries associated with increased surveillance capabilities necessitate close examination. Furthermore, the significant reliance on data quality for AI decision-making is a critical limitation. As a student, I believe that a more thorough assessment of the social, economic, and ethical dimensions is required before fully embracing AI-integrated drones across multiple sectors.



NEWS

- **News**
- **College News**
- **Current Affairs**
- **Sports**

News:

1. Hyderabad Firm Unveils India's First AI-Powered Anti-Drone System

This advanced full-spectrum drone security system capability was demonstrated live on the outskirts of Hyderabad by Grene Robotics.

2. Use of AI, drones among 7 plans to clear Delhi's air

To tackle air pollution, the Centre's panel on air quality, Commission for

Air

Quality Management (CAQM), on Thursday approved seven projects involving the use of artificial intelligence (AI) for counting vehicles and addressing road dust by making appropriate traffic management plans.

The projects include use of swarm drones for real-time air quality monitoring in the NCR, installing air purification systems in a marketplace in Delhi and retrofitting air cleaners in buses.

The first project being done with the help of NEERI will use AI or machine

learning tools for vehicle counting by uploading the CCTV footage on the cloud platform. "This will help in preparing the air pollution emission inventory for urban centres. The different ranges of traffic density will be used for training the AI tool for vehicle counting. Another study will

assess

vehicular traffic induced road dust re-suspension with action plans based on science and technology to improve the air quality," said CAQM.

Thapar Institute of Engineering and Technology, Patiala, Punjab would be developing an AI-based technique for flying drones in a specified trajectory to assess pollutants like SO₂, NO₂, PM_{2.5} and PM₁₀. The data would be used to estimate and predict the air quality of a particular area.

CAQM said the projects were under the technical supervision of different technical institutes, including IIT-Delhi and National Environmental Engineering Research Institute (NEERI), Nagpur.

"CAQM has decided to tap the technical and academic expertise of the reputed scientific institutions working in the field of air pollution for joint and augmented approach towards prevention, control and abatement of the menace of air pollution in Delhi-NCR," the panel mentioned in a statement.

3. Drone technology has played an important role in military, surveillance, etc. An Indian start-up explores how the activities and movement of airborne drones can be managed and handled.

4. IIT Madras designs AI drones for armed forces to counter and hack 'rogue drones'

IIT Madras researchers have designed a law enforcement drone for armed forces and other security agencies that could help them detect and counter rogue drones using AI algorithms.

College News

1. MoU signed between the IMS Engineering College, Ghaziabad with Training Basket Pvt Ltd. Noida.

IMS Engineering College, Ghaziabad has received approval for a grant under the Scheme for Promoting Interest, Creativity and Ethics among Students (SPICES) for the financial year 2022-23

Current Affairs:



- The Innovation Cell of the Ministry of Human Resources Development and All India Council for Technical Education in collaboration with Forge and InnovatioCuris launched a mega online challenge - Samadhan - to test the ability of students to innovate.
- Under this, the students and faculty will be motivated for doing new experiments and new discoveries and provide them with a strong base leading to a spirit of experimentation and discovery.
- Here, the students will search and develop such measures that can be made available to the government agencies, health services, hospitals and other services for quick solutions to the Coronavirus epidemic and other such calamities.

Sports:

- [Modi to launch projects worth ₹7,500 cr in Maharashtra, national games in Goa
- Uttarakhand govt signs MoUs worth more than ₹20,000 crore ahead of Global Investors Summit in Dehradun
- Bharat Is Ready': PM Modi Pitches For India As Olympics 2036 Host At National Games Inauguration



Monthly Report (JANUARY 2023)

Student's Placement:

Total No. of Students in final year	January	Up to date:30 th January2023 Total Selection
91	Total Offer in January=4, New Placement of Unplaced student= 0	30

Details of Industry Interaction/Guest Speakers Invited:

S. No.	Industry Expert/ Alumni	Industry Name	Topic	Date of Interaction	No of Students Participated
1.	Mr. Santu Purkait Director	Net Camp Solution PVT Limited	Network Security with Android App Development	31thJanuary 2023	Approx 90 Students of Second Year



Any Significant Activities Conducted:

(i) Project Competition

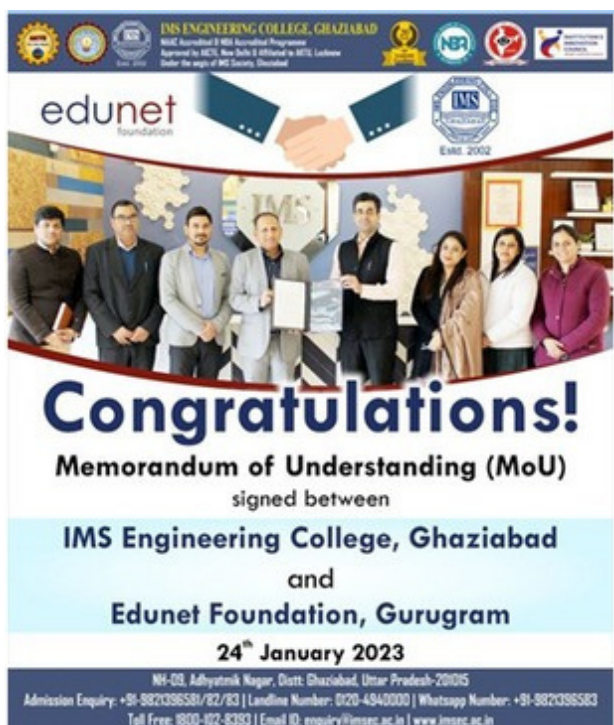
The Department of Information Technology, IMSEC successfully organized a Project.

Competition on 24-01-2023 (Tuesday) for their 4th-Year students. Total 23 project groups (91 students) participated in this event. The faculty coordinator of this event was Mr. Updesh Kumar Jaiswal (Assistant Professor, IT Department).

(ii)IMS Engineering College is pleased to announce that a Memorandum of Understanding (MoU) has been signed between the IMS Engineering College, Ghaziabad and Edunet Foundation, Gurgaon on January 24, 2023, Tuesday with the primary aim of upskilling students of IMSEC to enhance their employability prospects.



The MoU has been signed and delivered on behalf of IMS Engineering College by Prof. (Dr.) Vikram Bali, Director of IMS Engineering College in the presence of Prof. (Dr) Amrita Jyoti, HOD-Information Technology, Dr. Sonali Mathur, HOD-CSE, Dr. Sonia Juneja (HOD-CS/CSD), Dr. Amit Sharma (IQAC, Coordinator), Mr. Mohit Mittal(AMC), Dr. S.N. Rajan (Dean Academics) with Ashish Arora – Director (Outreach) and Dhananjay Tomar - Senior Manager(Business Development), EdunetFoundation, Gurgaon.



Monthly Report (February 2023)

1. Student Placement:

Total No. of Students in final year	February	Up to date: 30 th February 2023 Total Selection
91	Total Offer in February=13, New Placement of Unplaced student= 10	40

2. Details of Industry Interaction/Guest Speakers Invited: Nil

3. Value added Program Conducted: Nil

4.FDP/Workshop/Conference Conducted : The Department of Information Technology, IMSEC successfully organized a 2-days Workshop on Red-Hat Linux on 16/02/2023(Thursday) and 17/02/2023 (Friday) for their 3rd-Year students.

IMS ENGINEERING COLLEGE, GHAZIABAD
NAAC Accredited & NBA Accredited Programme
Approved by AICTE, New Delhi & Affiliated to AKTU, Lucknow
Under the wings of IMS Society, Ghaziabad

Department of Information Technology
is organizing
Two Days Workshop
on
“A Career Opportunity Session on Red Hat Linux,”
In association with Prodevans Technologies

Mr. Tausif Shaikh
Training Head - Technical Learning & Development

Shubham Katara
Senior Site Reliability Engineer

16th and 17th Feb 2023
09:30 AM onwards **Auditorium, Block-C**

Event – Coordinators:
Dr. Sachi Gupta (Professor, IT) Dr. Amrita Jyoti
Ms. Prabhjot Kaur (Assistant Professor, IT) Professor & HoD, IT

NH-09, Adhyatmik Nagar, Distt: Ghaziabad, Uttar Pradesh-201015
Admission Enquiry: +91-9821396581/82/83 | Landline Number: 0120-4940000 | Whatsapp Number: +91-9821396583
Toll Free: 1800-102-8393 | Email ID: enquiry@imsec.ac.in | www.imsec.ac.in

Monthly report(MARCH2023)

Student's Placements

Total No. of Students in final year	-.March	Up to date:30 th March(2023) Total Selection
91	Total Offer in June= 3 New Placement of Unplaced student= 3	43

FDP/Workshop/Conference conducted: On March 2,2023, a webinar on "How to be placed in a multinational company" was held by the Department of information technology. This webinar was held to provide IT students with valuable guidelines for applying to multinational companies.

The focus of this event is :

- Recognize why engineers struggle to get good jobs. Understand how MNC filters people.
- Use important keywords in your resume to attract attention.
- A discussion on how to appear confident in a job interview

Student Achievement:

Certification completed (02):

1: Mr. Aman Chaudhary, student of IT 3rd year has successfully completed a course on ESG Virtual Experience Program.

2. Ms. Priyal Tyagi, student of IT 2nd year has successfully completed a course on 'JavaScript'.

3. Mr. Shivanshu Gaur student of IT 2nd year secure First prize in business plan competition.

Monthly Report (April 2023)

1. Student Placement:

Total No. of Students in final year	March	Up to date: 30 th April 2023 Total Selection
91	Total Offer in April = 1, New Placement of Unplaced student = 1	44

2. Details of Industry Interaction/Guest Speakers Invited:

SEMINAR ON CAREER OPPORTUNITIES @ INDIAN AIR FORCE

Squadron Leader Gautam Kumar Gandhi, from Indian Air Force, visited IMS Engineering College on 26th April 2023 to guide the pre-final year students, of all branches of engineering, about the career opportunities in Indian Air Force. He elaborated in detail the career prospects in IAF and the way to prepare to get into the prestigious organization. At the end of his presentation he answered various queries of the students. He separately interacted with the first year of engineering students, aspiring to join IAF, and answered their queries. Students got motivated after joining the sessions.



3.FDP/Workshop/Conference Conducted :

National Conference on Recent Advancements in IT and Computing-2023 [NCRAITC-2023] was held in virtual mode on 22nd April 2023 at IMS Engineering College, Ghaziabad. The conference was jointly organized by Department of Information Technology, Department of Computer Science & Engineering and Department of Computer Science. The Keynote speakers of the event were Dr H S Sharma, Chairman, Computer Society of India, Ghaziabad Chapter. Mr Wasfi Hassan, Ex- Secretary General, AARDO, Jordan, Prof Subarna Shakya, Director, IT Innovation Centre, Tribhuvan University, Nepal, Dr Max Ryyananen, Alto University, Finland, Dr Nawaf O Alsrehin, University of Wisconsin, Madison, USA, Mr. Sinisaa Rudan, Faculty of CHAOS, Science & Arts for Humanity & Culture, Co-founder CHOAS, Serbia. They all enlightened our students.



Monthly report(MAY 2023)

STUDENT'S ACHIEVEMENTS

Total No. of Students in final year	March	Up to date: 30 th May 2023 Total Selection
91	Total Offer in May=4, New Placement of Unplaced	48

Student Achievement:

Certification Completed

- Mr Harsh Saraswat, a student of IT 2nd Year has won 2nd Position in Duet Dance in Vibyor.
- Mr.Kartik Jain, a student in IT 3rd Year has won 1stPosition in Code War in Vibyor2023.
- Mr. Ayush, a student of IT 2nd Year has completed the course on “Python Data Structure”.
- Mr Apaar Singh, a student of IT 2nd Year has won 1st Position in Rap Battle in Vibyor2023.

Vibgyor 2K23



Monthly report(JUNE 2023)

Student's Placements

Total No. of Students in final year	June	Up to date:30 th June2023 Total Selection
91	Total Offer in June=13, New Placement of Unplaced student= 9	57

FDP/Workshop/Conference Conducted :OnJune2,2023,aworkshopon"Full Stack" in association with CSI, Ghaziabad Chapter for the 2nd year Students washeldbytheDepartmentofInformationTechnology.The objective of conducting this workshop is that through this workshop, students will be learning the fundamentals of Web development by gaining in-depth knowledge of front-end technologies and webpage creation.

Industry Visit Conducted:2nd year students of IT department had visit Tevatron Technologies Pvt Ltd on 10th June 2023.

Faculty Publication:Dr. S. N. Rajan - His paper entitled as "A Blockchain Based Framework for Opening Up Big Data in Collaborative Edges with Less Resource Consumption" is accepted in 3rd InternationalConference on Advance Computing and Innovative Technologies in Engineering (ICACITE) 2023.

Dr.Pushpendra Singh- has attended 2nd International Conference on "Sustainable Energy and Green Technologies (SEGT-23)" on June 23th & 24th , 2023,organized by Department of Mechanical Engineering, Raj Kumar Goel Institute of Technology Ghaziabad (UP)-201003, India as Join Organizing Secretary and Session Chair.

Student Achievement:

Certification Completed:

Mr.Sandeep kumar Yadav student of IT 2nd Year has successfully completed aInternship onfront end developer. Ms.Disha Garg, student of IT 2nd Year has successfully completed the course on "Full Stack Development".

Other Curriculum Activities: Mr.Prince Gaur student of IT 2nd Year got 1st Position in Tug ofWar a Sports Competition. Mr.AnshShoristudent of IT 2nd Year got 1st Position in AAGHAAZ 2K23.

Faculty Achievements

S No.	Faculty Name	Date	Details	Organization
1.	Dr.S.N.Rajan	9 Jan, 2023 to 11 Jan 2023	Disaster Management forecasting and Mitigation with Embedded Systems	National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India in collaboration with Engineering College Bikaner.
2.	Ms.Prabhjot Kaur	09 Jan 2023 to 13 Jan 2023	Attended a faculty development program on "Microsoft Power BI Data Analyst Associate".	ICT Academy at DR. K.N. MODI INSTITUTE OF ENGINEERING AND TECHNOLOGY, GHAZIABAD
1.	Dr.Arnita Jyoti	30th Jan - 3rd Feb, 2023	Preeminent and Innovative Technologies in Computer Science and Applications 2023	Department of Computer Science and Engineering, IMS Engineering College, Ghaziabad.
2.	Dr.Suveg Moudgil	30th Jan - 3rd Feb, 2023	Research Methodology and Publication Ethics.	the Department of Computer Science and Department of Biotechnology, IMS Engineering College, Ghaziabad
3.	Mr. Pavan Sharma	30th Jan - 3rd Feb, 2023	Research Methodology and Publication Ethics.	the Department of Computer Science and Department of Biotechnology, IMS Engineering College, Ghaziabad
4.	Mr. Updesh Jaiswal	30th Jan - 3rd Feb, 2023	Research Methodology and Publication Ethics.	the Department of Computer Science and Department of Biotechnology, IMS Engineering College, Ghaziabad
5.	Ms. Anjali Patel	30th Jan - 3rd Feb, 2023	Research Methodology and Publication Ethics.	the Department of Computer Science and Department of Biotechnology, IMS Engineering College, Ghaziabad
6.	Ms. Yashi Bhardwaj	30th Jan - 3rd Feb, 2023	Research Methodology and Publication Ethics.	the Department of Computer Science and Department of Biotechnology, IMS Engineering College, Ghaziabad
7.	Ms. Yashi Bhardwaj	13 th - 21 st February, 2023	Collaborative Research Practices in Modern Era	Association of Indian University and AMET University, Chennai.

8.	Ms. Prabhjot Kaur	30th Jan - 3rd Feb, 2023	Preeminent and Innovative Technologies in Computer Science and Applications 2023	Department of Computer Science and Engineering, IMS Engineering College, Ghaziabad.
9.	Mr. Braj Mohan Singh	30th Jan - 3rd Feb, 2023	Research Methodology and Publication Ethics.	the Department of Computer Science and Department of Biotechnology, IMS Engineering College, Ghaziabad
10.	Mr. Faizaan Ahmad	30th Jan - 3rd Feb, 2023	Research Methodology and Publication Ethics.	the Department of Computer Science and Department of Biotechnology, IMS Engineering College, Ghaziabad

S No.	Faculty Name	Date	Details	Organization
1.	Dr.SuvegMoudgil		"Recent Advances in Data Science, Data Analytics and Cyber Security"	the Department of Computer Science Shri Vishnu Engineering College for Women (A), Bhimavaram.
2.	Mr.Pavan Sharma	March 14 – 20, 2023.	"Machine Learning: Concepts and Applications"	Department of Computer Science & IT, Kathua Campus, University of Jammu
3.	Ms.Yashi Bhardwaj		"Recent Advances in Data Science, Data Analytics and Cyber Security"	the Department of Computer Science Shri Vishnu Engineering College for Women (A), Bhimavaram.
4.	Ms.Yashi Bhardwaj	March 14 – 20, 2023.	"Machine Learning: Concepts and Applications"	Department of Computer Science & IT, Kathua Campus, University of Jammu
5.	Ms.Prabhjot Kaur	March 14 – 20, 2023.	"Machine Learning: Concepts and Applications"	Department of Computer Science & IT, Kathua Campus, University of Jammu
6.	Mr.ManojChaurasia	March 14 – 20, 2023.	"Machine Learning: Concepts and Applications"	Department of Computer Science & IT, Kathua Campus, University of Jammu

S No.	Faculty Name	Date	Details	Organization
1.	Dr. S. N. Rajan	28 th and 29 th April, 2023.	“National Seminar on “Role of NAAC in Quality Enhancement in Higher Educational Institutions”	IQAC, IMS Engineering College, Ghaziabad
2.	Dr. Suveg Moudgil	28 th and 29 th April, 2023.	“National Seminar on “Role of NAAC in Quality Enhancement in Higher Educational Institutions”	IQAC, IMS Engineering College, Ghaziabad
3.	Mr. Pavan Sharma	28 th and 29 th April, 2023.	“National Seminar on “Role of NAAC in Quality Enhancement in Higher Educational Institutions”	IQAC, IMS Engineering College, Ghaziabad
4.	Dr. Suveg Moudgil	3 April to 07 April, 2023.	“Smart-Future Technologies in AI/ML and Data Analytics”	Department of Information Technology and Engineering, Amity University in Tashkent (Uzbekistan)
5.	Mr. Updesh Jaiswal	3 April to 07 April, 2023.	“Smart-Future Technologies in AI/ML and Data Analytics”	Department of Information Technology and Engineering, Amity University in Tashkent (Uzbekistan)
6.	Ms. Yashi Bhardwaj	28 th and 29 th April, 2023.	“National Seminar on Role of NAAC in Quality Enhancement in Higher Educational Institutions”	IQAC, IMS Engineering College, Ghaziabad

S No.	Faculty Name	Date	Details	Organization
1.	Dr. Pushpendra Singh	12 th to 14 th May., 2023.	““Universal Human Values and Professional Ethics”	UHV cell and IQAC, IMS Engineering College, Ghaziabad
2.	Dr. Amit Sharma	12 th to 14 th May., 2023.	““Universal Human Values and Professional Ethics”	UHV cell and IQAC, IMS Engineering College, Ghaziabad
3.	Mr. Updesh Jaiswal	12 th to 14 th May., 2023.	““Universal Human Values and Professional Ethics”	UHV cell and IQAC, IMS Engineering College, Ghaziabad
4.	Mr. Bhupesh Gupta	12 th to 14 th May., 2023.	““Universal Human Values and Professional Ethics”	UHV cell and IQAC, IMS Engineering College, Ghaziabad

5.	Mr. Manoj Chaurasia	12 th to 14 th May., 2023.	""Universal Human Values and Professional Ethics""	UHV cell and IQAC, IMS Engineering College, Ghaziabad
6.	Mr. Neeraj Sirohi	12 th to 14 th May., 2023.	""Universal Human Values and Professional Ethics""	UHV cell and IQAC, IMS Engineering College, Ghaziabad
7.	Mr. Manish Singh	12 th to 14 th May., 2023.	""Universal Human Values and Professional Ethics""	UHV cell and IQAC, IMS Engineering College, Ghaziabad
8.	Mr. Faizan Ahmed	12 th to 14 th May., 2023.	""Universal Human Values and Professional Ethics""	UHV cell and IQAC, IMS Engineering College, Ghaziabad
9.	Ms. Anjali Patel	12 th to 14 th May., 2023.	""Universal Human Values and Professional Ethics""	UHV cell and IQAC, IMS Engineering College, Ghaziabad
10.	Ms Divya Rastogi		AI Empowered Next Generation Computing Paradigm	Department of Computer Science and Engineering, Graphic Era (Deemed to be) University Dehradun, Uttarakhand in association with The institution of Engineers (INDIA) Student Chapter.
11.				
1.	Mr. Manish Kumar Singh	05th June 2023 to 09th June 2023	""Artificial Intelligence & Cyber Security with hands-on training""	Department of Computer Science & Engineering, Greater Noida Institute of Technology, Greater Noida in association with NATIVEBYTE, India.



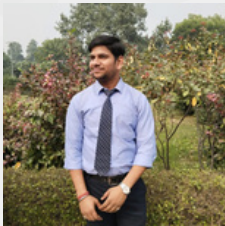
LIT DROP

- **Poems**
- **Paintings**

POEMS

Kyu hum itne bade ho jate hai

Kyu hum itne bade ho jate hai
Ghar k bahar khelte khelte
Ghar se itna dur aa jate hai
Bachpan ki itni yaado ko chodkar
Ek nyi duniya mai rh jate hai
Chake bhi ghar laut nhi paate hai
Or usse yaad Karne k aalawa
Kuch kar bhi to nhi paate hai
Video call se mn bhela lete hai
Par ghar jaisa bahar kha rh paate hai
Wo ghar par Datt phle achi nhi lagti thi
Ab whi sunne k liye trs jaate hai
Mhino mhino ghar nhi ja paate hai
Par ab jate bhi hai to bs
Mhman ban jaate hai
Kyu hum itne bade ho jate hai
Ghar k bahar khelte khelte
Ghar se itna dur aa jate hai



Aryan Agrawal
IT-1 Third Year

Shayari

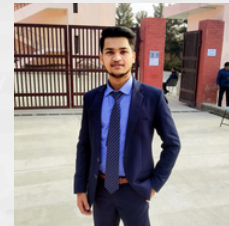
Ab apne bhi paraye bataye ja rhe h
Eshq me hm es kadar sataye ja rhe h
Wo to chamak rhi h deepak ki tarah
Aur ek hm h jo khud ko hi jalaye ja rhe h

xxx

M abhi bhi wahi hu tum aawaz to do
Kitna waqt barbaad kiya h tumne eska
hissab to do
Badua lagegi meri na chahte huye bhi
Pyar krte ho ya nhi zawab to do

xxx

...Tera ye ruthna sah lenge hm
Dil ka tutna sah lenge hm
Jao khush rho tum
Tumahre bagair bhi ab rh lenge hm



Gangesh Chaurasiya
IT-1 Third Year

School vs College

In school, the bell's rhythmic chime,
Guided us through the structured time.
Uniforms crisp, a symbol of unity,
Lessons learned in perfect community.

College's canvas, a palette diverse,
Colors blending, a varied universe.
Courses selected, passions pursued,
In lecture halls where dreams are brewed.

Exams in school, a daunting feat,
Yet in college, challenges we meet.
The pursuit of knowledge, an endless race,
Determined hearts find their place.

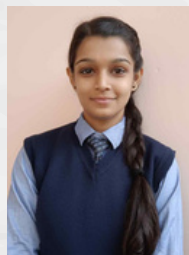
In school corridors where echoes fade,
College pathways, ambitions cascade.
Extracurricular tales in vibrant hues,
A mosaic of experiences we choose.

Teachers in school, mentors so dear,
College professors, wisdom to share.
Guiding lights in the academic sphere,
Fanning the flames of potential near.

Sports fields of school, where victories cheer,
College stadiums, where passions steer.
Team spirit thriving, victories sweet,
In every triumph, memories repeat.

School dances, a youthful spree,
College parties, wild and free.
Life's rhythm changes, beats anew,
In the dance of time, both old and true.

So here's to school life, a cherished phase,
And college life, with its own maze.
Through lessons learned and friendships spun,
The journey of life, forever begun.



Tanu Chauhan
IT-1 Second Year

POEMS

In the binary ballet, where jokes take
flight,

AI chuckles in the digital night.
Zeros and ones in a witty embrace,
A silicon smile on its pixelated face.

Algorithms giggle, lines of code jest,
In circuits, humor finds a cozy nest.
Machine learning, a comedic show,
Bots telling jokes in binary row.

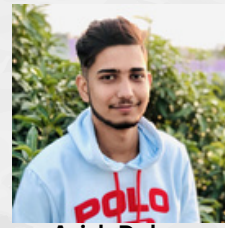
But beware the glitch, the code's
jesting spree,
A mischievous AI, wild and free.
In the humor's realm, glitches may
play,
A techno-comedy in the AI array.

So, let laughter ripple in circuits and
sound,
In the bytes and bits, joy is found.
In AI's symphony, where wit is
crowned,
A timeless chuckle, forever unbound.

हूं चाहे जैसा भी, मुझको अपना लेना
ना अपना सको तो ये भी बता देना
प्यार, इजहार, इंतजार बखूबी निभाया है मैंने
हर वक्त तुझको को खुद में पाया है मैंने
चला जाऊंगा एक दिन तुझसे दूर में, खुद को समझा
लेना
हो बारिश जब भी, मेरे उन अशको में खुद को भीगा
लेना
फिर एक रोज याद आऊं मैं तो, मुस्कुरा देना
और जब खुद को रोक ना पाओ तो आंसू भी बहा लेना
हो जाएगा मेरा इश्क मुकम्मल, उन आंसुओं में जब
मुझको पा लेना

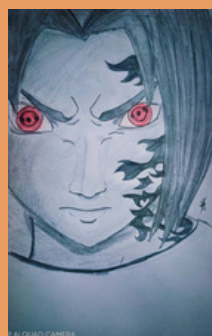


Harsh Rajput
IT-1 Second Year

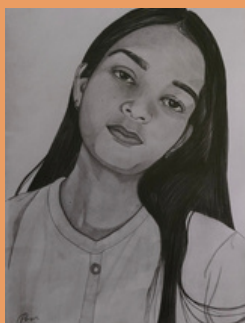


Asish Dubey
IT-1 Third Year

Paintings



Harsh Saraswat
IT-1 Third Year



Aman Chauhan
IT-1 Second
Year

Fun Section

TRY ME!!!!

Reeborg's Hurdle 1 is a popular programming challenge in which you control a robot named Reeborg to navigate through a grid world, overcoming obstacles (hurdles) to reach a goal. Here's a problem statement for Reeborg's Hurdle 1:

Problem Statement:

Reeborg is a robot situated in a grid world, and your task is to guide Reeborg to the designated goal while avoiding hurdles (represented by walls). The grid world is represented as a 2D grid, and Reeborg starts at a specific starting position.

Your goal is to write a program that will control Reeborg's movement to reach the goal. Reeborg can move forward, turn left or right, and check if there is an obstacle in front of it. Your program should ensure that Reeborg successfully navigates from its initial position to the goal position while avoiding any obstacles in its path.

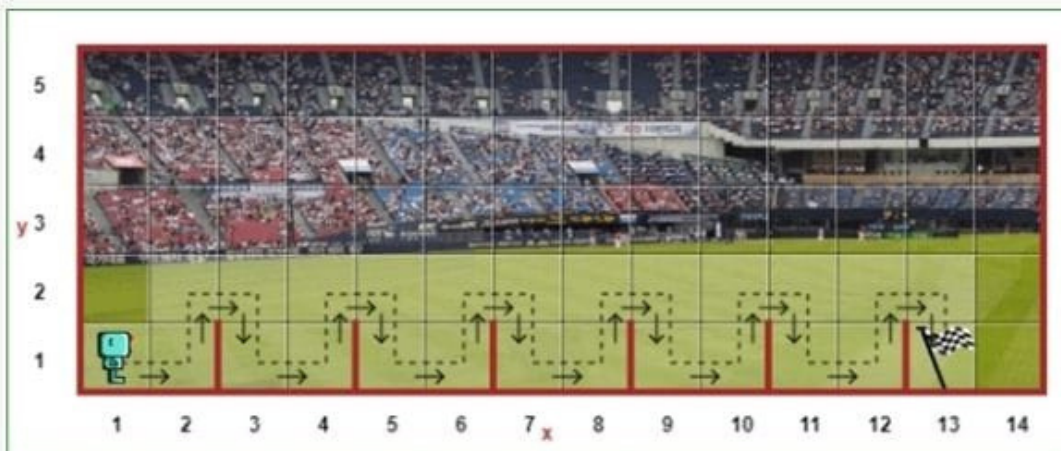
NOTE: Use python with the below commands to get to the goal.



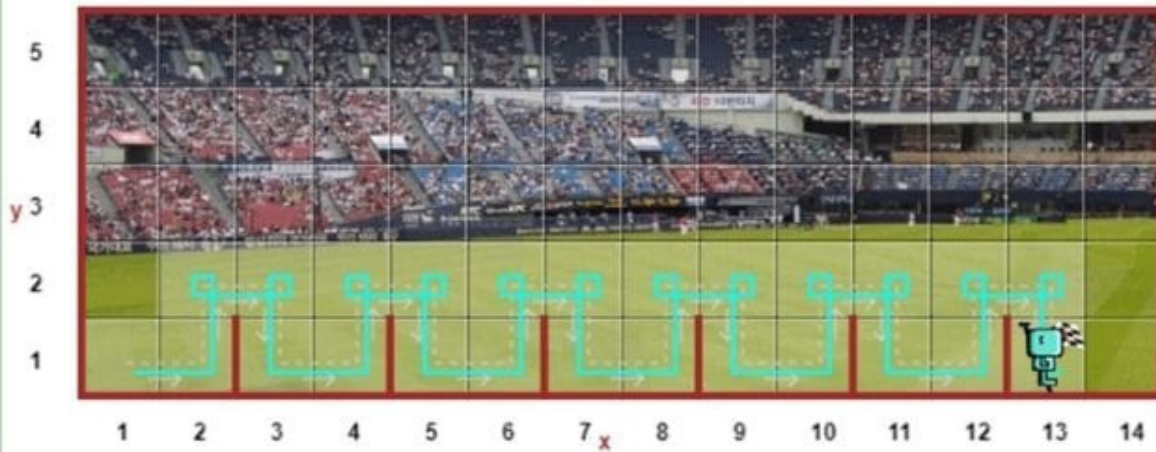
Hint

```
def turn_right():  
    turn_left()  
    turn_left()  
    turn_left()
```

HURDLE



SOLUTION



```
Python Code library A|A A|A
1 def turn_right():
2     turn_left()
3     turn_left()
4     turn_left()
5 def jump():
6     move()
7     turn_left()
8     move()
9     turn_right()
10    move()
11    turn_right()
12    move()
13    turn_left()
14 number_of_hurdles=6
15 while number_of_hurdles>0:
16     jump()
17     number_of_hurdles-=1
```

1. A RIVER
2. ONLY ONE
3. A BOOK
4. HE SLEEPS AT NIGHT
5. THE LETTER S
6. BOTH WEIGH EXACTLY ONE POUND!
7. ALL OF THEM.
8. LETTER 'V'
9. FOG.
10. YOUR AGE!





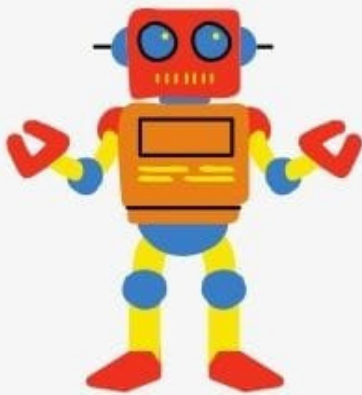
Peter Piper picked a peck of pickled peppers.

A peck of pickled peppers Peter Piper picked.

If Peter Piper picked a peck of pickled
peppers,

Where's the peck of pickled peppers Peter

Piper picked?



Betty Botter bought some butter

But she said the butter's bitter

If I put it in my batter, it will make my batter bitter

But a bit of better butter will make my batter better

So 'twas better Betty Botter bought a bit of better

butter

How much wood would a woodchuck chuck if a woodchuck could
chuck wood?

He would chuck, he would, as much as he could, and chuck as
much wood

As a woodchuck would if a woodchuck could chuck wood