



Provisions of Medicare with AI-Integrated Drone

Soham Yadav¹ | Gauri Ansurkar²

¹Department of Information Technology, Keraleeya Samajam's Model College, Dombivli East, Mumbai, Maharashtra, India

²Assistant Professor, Department of Information Technology, Keraleeya Samajam's Model College, Dombivli East, Mumbai, Maharashtra, India

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ABSTRACT

As we are in the modern age, we have evolved with many technologies which support routine. The rapid growth in technology makes the human task easier. Augmentations of high-speed networks and agile transportation also impact defence and security systems.

The invention of drones is also an effect of growth in technology. The drone's scheme is multifunctional such as surveillance, agriculture, monitoring various issues, and rescue purposes.

Whatever it is, drones can gain a substantial impact on the medical sector. In this case, medical emergencies can occur at any time to a civilian. So, it is required to find a way which is easy, rapid to travel and have low traffic

INTRODUCTION

In the early days of life, we learned there are three main modes of transport we use in lifestyle Aerial, Water, and Land. A drone is such an invention that can quickly help in any field. These devices have many auxiliary areas like surveillance, agriculture, firefighting, excavation, research, and development.

With the rise in population and residency, the roads are incapable converge medical emergencies, due to which we should establish aerial help which can carry medical equipment from a distance in causalities.

Supported by indigenous technology, manufacturing drones is feasible to lower expenditure. Drones made with indigenous technology will help in increasing our economy. Moreover, using indigenous technology will reduce the risk of data leakage or data breach.

OVERVIEW

Drone: Contains definition and specification of drone

Literature Review: Why drones are used.

Methodology: Technologies used in drone

Pros and Cons: Advantages and Disadvantages of drone

Public Survey: With the help of google form a survey done between 18 and above age group

Survey Questionnaire and Results: Result got after survey

Descriptive Statistics: Statistical views on Survey Result

Findings: Public reaction on the topic

Conclusion: Summary of the topic

Reference

DRONE

The definition of drones can subtitle as per the situation because of their multi-functional role. It essentially uses for surveillance, agriculture, firefighting, search, and rescue. The term can title as.

A mechanism integrated by an Artificial Intelligence system that is mechanized or controlled widely with

Infrared or Radio based Frequency systems on any surface. Such devices build with thermographic cameras and a global positioning system that support reaching the designated place. They also integrate with armaments to control the situations and radar to detect anonymously.

But this device may vary as per their other service. In the medical field, there is a need for such a machine that can carry goods from one place to another by dynamically moving packages.

LITERATURE REVIEW

In India, drones are conventionally many fields in the military exercised for border security during warfare and surveillance during special occasions. And in natural calamities, they are used to deliver small aid packages. The deployment of non-military drones first occurred to support damage assessments in areas affected by a major disaster. Drones are uncomplicated and can move airy without risk in such deployment. They eventually used to deliver small aid packages. In some countries, they are used to carry parcels.

We have heard about the Mariana Trench, a track down in the Western Pacific Ocean. Its depth is 35,768 feet, which is about 11 kilometres. We came across it through an underwater drone named Nereus. It's a hybrid drone and a remote-controlled ROV manufactured by the Woods Hole Oceanographic Institution.

Here we will discuss how effectively a drone can help us in the medical field. The drone travels in the air in an aerial route known as the fastest route to travel, so how much can it help us with its pros and cons?

METHODOLOGY

The research aimed at if the drone can perform as a multi-functional technology in the South Asian atmosphere. A drone has capabilities for all terrains and multi-functional duties. So, they equip with various equipment as per their use. A drone acquires a combination of ultrasonic obstacle avoidance, lidar, stabilization, and orientation sensors. Visual sensors offer still and video data.

The average flight height of the drone is 1600-3200 ft. It can easily travel at the pace of 60-90 km/h by air carrying 5-20 kg weights. It will track the location with the help of GPS mode. In these, the Obstacle Avoidance Sensor is mounted at the front and the bottom side. With its

assistance, they can effortlessly fly in the air without colliding with any object. It also has an ultrasonic sensor at the bottom, which refers to how many altitudes the drone has received. Apart from this, they are integral with Cameras and Electronic Speed Controller, which can be used for monitoring and to supply electric current equally to every component

It's optimization in the medical field to carry biological equipment.

PROS AND CONS

PROS

Drones can provide human aid and potentially life-saving treatments to areas affected by natural disasters and emergencies, leading to a quicker, more efficient response time. The provisions include medical supplies, antivenom, vaccines, and blood products.

Carrying laboratory samples or blood, additionally, unique products brought to remote clinics or hospitals.

Delivery of prescriptions and other supplies to out-of-the-way people involves those at sea or indoors.

The organs' transportation for Xenograft.

The potential to deliver telemedicine with medical support involves diagnostics or even tools such as portable ultrasound to remote areas.

CONS

Regulatory limitations should convey and updated before using drones in the medical field. These include legislation about predetermined flight corridors where drones need to fly 'in the line of sight. In medical emergencies, the fastest route needs to engage to ensure life-saving therapy, including flying out of sight. As such, any deviation from this might adversely impact the health and survival rate of a patient.

The significance of drones will depend on the person aiming to provide support to the casualties. Such an arrangement might be a setback when analogizing the traditional medical transport methods and delivery of medical aid.

Storage and transportation of all medical specimens via drones need to be carefully implemented and monitored. It includes the cold storage and duration for portage that may affect drug efficacy and specimen data results. Any compromise on these parameters could lead to sincere consequences for the health and well-being of a patient.

Due to this technology many delivery boys can lose their jobs.

There is a risk of product or device loss.

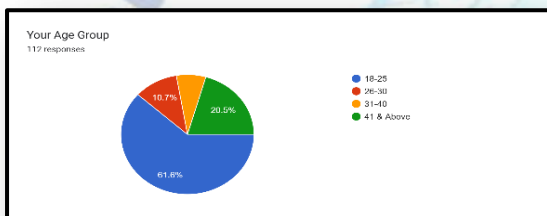
PUBLIC SURVEY

We have surveyed the top of this research paper, which can prove what is the demand by the public for the provision of aid during an emergency. This research survey was made between students, few doctors, teachers, senior citizens, and from many other professions.

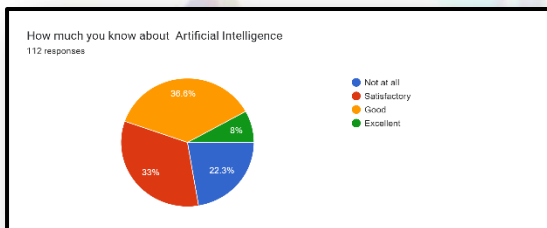
SURVEY QUESTIONNAIRE AND RESULTS

BELOW IS THE RESULT OF A SURVEY DONE.

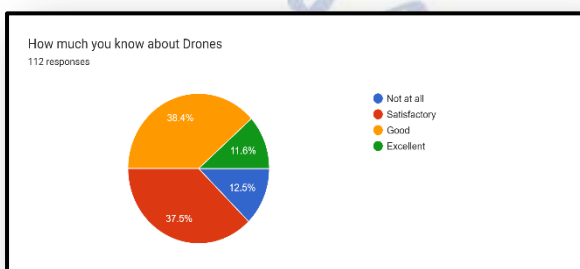
1. YOUR AGE GROUP



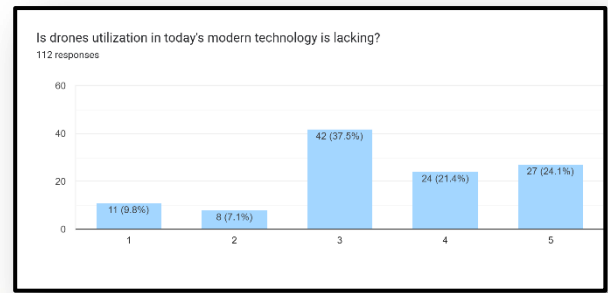
2. HOW MUCH YOU KNOW ABOUT ARTIFICIAL INTELLIGENCE



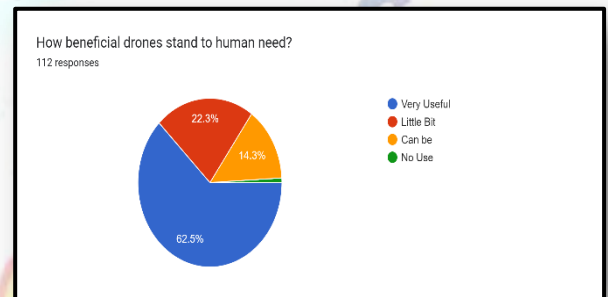
3. HOW MUCH YOU KNOW ABOUT DRONES



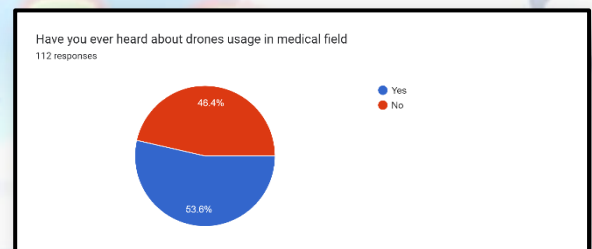
4. IS DRONES UTILIZATION IN TODAY'S MODERN TECHNOLOGY IS LACKING?



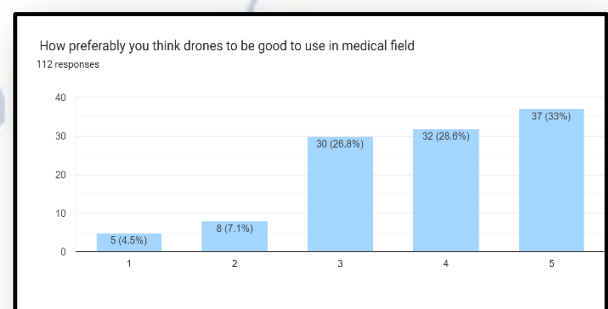
5. HOW BENEFICIAL DRONES STAND TO HUMAN NEED?



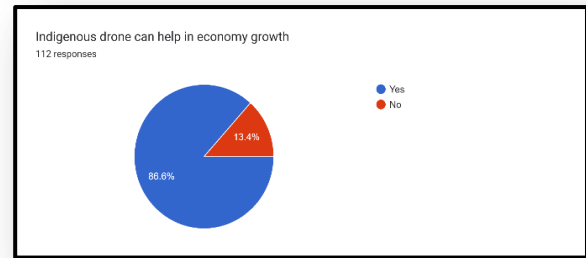
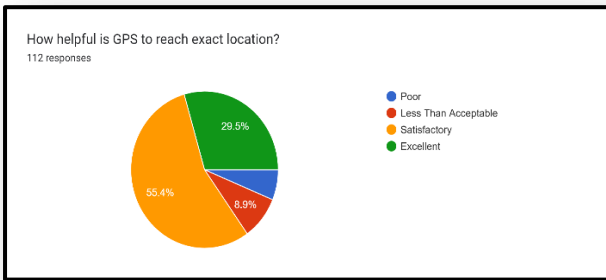
6. HAVE YOU EVER HEARD ABOUT DRONES' USAGE IN MEDICAL FIELD



7. HOW PREFERABLY YOU THINK DRONES TO BE GOOD TO USE IN MEDICAL FIELD

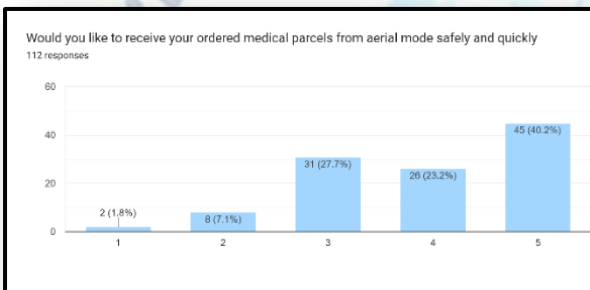


8. HOW HELPFUL IS GPS TO REACH EXACT LOCATION?



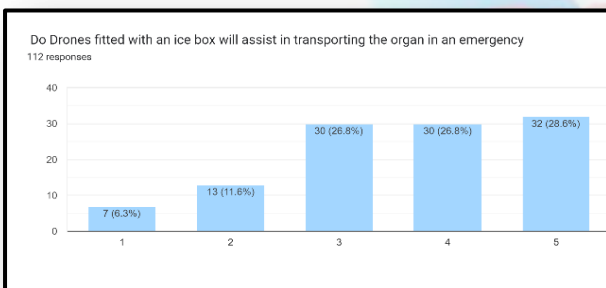
11. INDIGENOUS DRONE CAN HELP IN ECONOMY GROWTH

WOULD YOU LIKE TO RECEIVE YOUR ORDERED MEDICAL PARCELS FROM AERIAL MODE SAFELY AND QUICKLY



Descriptive Statistics

Descriptive statistics describe, show, and summarize the basic features of a dataset found in a given study, presented in a summary that describes the data sample and its measurements. It helps analysts to understand the data better.



How much you know about Artificial Intelligence	
Mean	2.297297297
Standard Error	0.086419917
Median	2
Mode	3
Standard Deviation	0.910490323
Sample Variance	0.828992629
Kurtosis	-0.897269574
Skewness	0.033758663
Range	3
Minimum	1
Maximum	4
Sum	255
Count	111

10. DO DRONES FITTED WITH AN ICE BOX WILL ASSIST IN TRANSPORTING THE ORGAN IN AN EMERGENCY

How beneficial drones stand to human need?	
Mean	3.468468468
Standard Error	0.073320474
Median	4
Mode	4
Standard Deviation	0.772479124
Sample Variance	0.596723997
Kurtosis	0.105283219
Skewness	-1.15807315
Range	3
Minimum	1
Maximum	4
Sum	385
Count	111

Standard Error	0.106402045
Median	4
Mode	5
Standard Deviation	1.121015101
Sample Variance	1.256674857

How much you know about Drones	
Mean	2.486486486
Standard Error	0.081814861
Median	2
Mode	2
Standard Deviation	0.861973052
Sample Variance	0.742997543
Kurtosis	-0.616775315
Skewness	-0.000886949
Range	3
Minimum	1
Maximum	4
Sum	276
Count	111
Kurtosis	-0.184270154
Skewness	-0.683989867
Range	4
Minimum	1
Maximum	5
Sum	421
Count	111

Have you ever heard about drones' usage in medical field	
Mean	1.459459459
Standard Error	0.047516166
Median	1
Mode	1
Standard Deviation	0.500613874
Sample Variance	0.250614251
Kurtosis	-2.009334213
Skewness	0.164935116
Range	1
Minimum	1
Maximum	2
Sum	162
Count	111

How helpful is GPS to reach exact location?	
Mean	3.099099099
Standard Error	0.073471267
Median	3
Mode	3
Standard Deviation	0.774067826
Sample Variance	0.599180999
Kurtosis	1.003164501
Skewness	-0.892281944
Range	3

How preferably you think drones to be good to use in medical field	
Mean	3.792792793

Minimum	1
Maximum	4
Sum	344
Count	111

Sum	400
Count	111

Would you like to receive your ordered medical parcels from aerial mode safely and quickly	
Mean	3.936936937
Standard Error	0.101001763
Median	4
Mode	5
Standard Deviation	1.064119604
Sample Variance	1.132350532
Kurtosis	-0.522900382
Skewness	-0.61008649
Range	4
Minimum	1
Maximum	5
Sum	437
Count	111

Indigenous drone can help in economy growth	
Mean	1.135135135
Standard Error	0.032595821
Median	1
Mode	1
Standard Deviation	0.343418284
Sample Variance	0.117936118
Kurtosis	2.731311587
Skewness	2.163889636
Range	1
Minimum	1
Maximum	2
Sum	126
Count	111

Do Drones fitted with an ice box will assist in transporting the organ in an emergency	
Mean	3.603603604
Standard Error	0.113955952
Median	4
Mode	5
Standard Deviation	1.20060045
Sample Variance	1.441441441
Kurtosis	-0.616673739
Skewness	-0.505683339
Range	4
Minimum	1
Maximum	5

Findings

The non-technical background people also have a good knowledge about the modern technology. They also have good idea about Artificial Intelligence. The Global Positioning System (GPS) has been used by many. According to them they are easy to find routes through GPS module.

They also have good knowledge about Drones and their specifications. Regarding topic their view was they would like to see optimization of drones in medical field. As per them the drone can be easily use for carrying medical specimen for the causalities. But as a risk it should be done under professionals and high-quality build material should be used special indigenous. As indigenous drone can help in growth of economy. They were agreeing with transportation of organ in an emergency case with the help of drone fitted icebox.

Conclusion

According to a survey, we have concluded both advantages and disadvantages of drones in the medical

field. As a smart and literate public achievement of best response was possible. During the survey, we took the opinion of many certified clinical doctors, according to them, the use of drones is useful in the medical field in emergency cases. But they also say it is precarious the drone may be captured by someone, or it gets damaged on the way between them, or many more

cases. Some people believe that if drones equip with indigenous technology, then they can also work for the country's economic growth.

Whether this method should be used or not, it is necessary to have a debate on a large scale because, through research, 30 - 40% of the people may not see any problem in this process. But we should also note that amid the increasing crowd on the roads, we see many ambulances getting stuck, which sometimes causes the death of someone. So, we need an easy, movable and comfortable way to get suffer best medical aids quickly.

Conflict of interest statement

Authors declare that they do not have any conflict of interest.

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