



**PROJECT TITLE:-**

# **QUADCOPTER**

**PRESENTED BY:-**

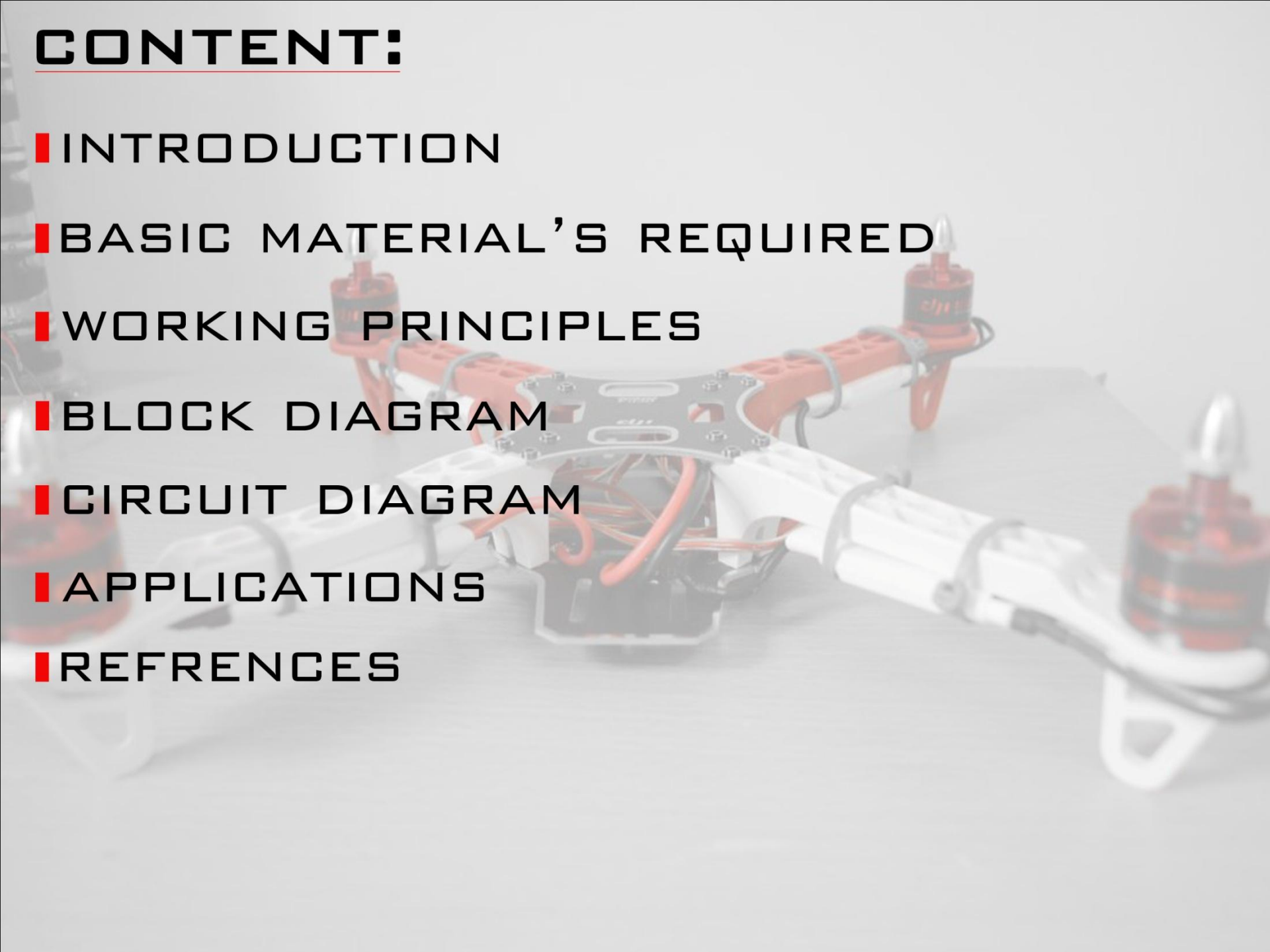
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  - WORKING PRINCIPLES
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# INTRODUCTION:

OVER THE LAST FEW YEARS WE HAVE SEEN A MASSIVE GROWTH IN THE MANUFACTURE AND SALES OF REMOTE CONTROL AIRBORNE VEHICLES KNOWN AS QUADCOPTER.

THEY ARE SOME TIMES REFERRED TO AS DRONES, QUADROTTERS OR QUAD COPTERS.

THESE UNMANNED AEREIL VEHICLES HAVE FOUR ARMS AND FIXED PITCH PROPELLERS WHICH ARE SET IN A 'X' OR '+' SYMBOL.

IN THE SNANDARD FORMAT TWO PROPELERS WILL SPIN IN A CLOCK WISE DIRECTION WITH THE OTHER TWO SPINNING IN AN ANTI-CLOCK WISE DIRECTION ALLOWING TO FLY IN A DESIGNATED DIRECTION.

# BASIC MATERIAL'S REQUIRED:

💡 K.K. MICROCONTROLLER V.5.5

💡 BRUSHLESS MOTORS - 1200KV

💡 1.2 GHZ TRANSMITTER AND RECEIVER

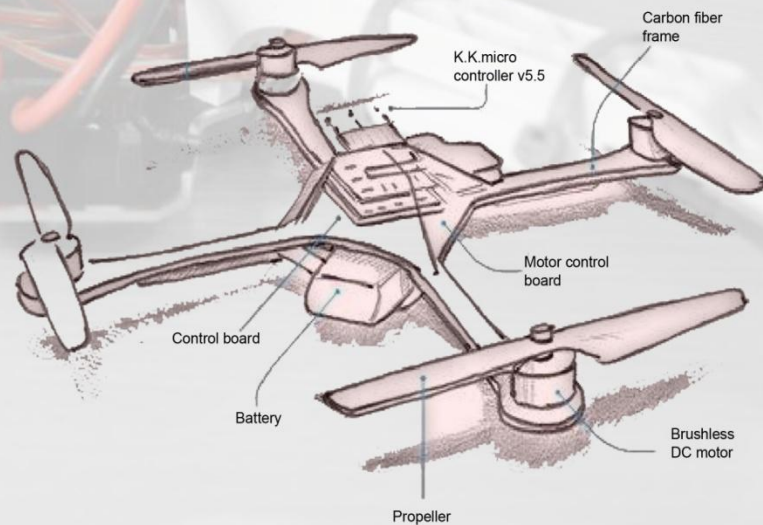
💡 ELECTRONIC SPEED CONTROLERS (ESC)

💡 BULLET CONNECTORS

💡 PROPELLERS

💡 POWER SUPPLY

💡 A STRONG BASE AS TO HOLD THE STRUCTURE



# WORKING PRINCIPLES:

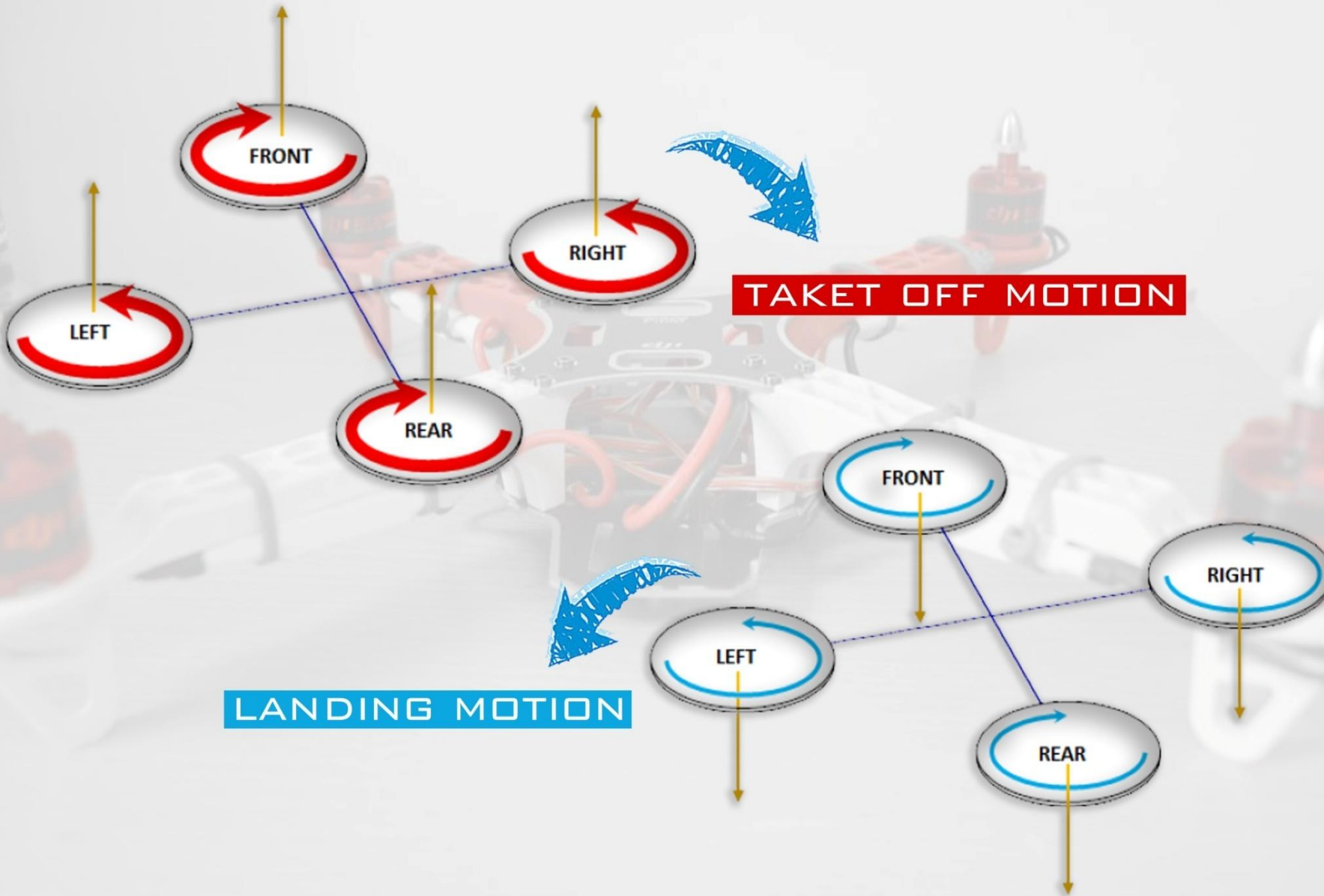
💡 QUADCOPTER IS A DEVICE WITH AN INTENSE MIXTURE OF ELECTRONICS, MECHANICAL AND MAINLY ON THE PRINCIPLE OF AVIATION.

💡 QUADCOPTER HAS FOUR MOTOR'S WHOSE SPEED OF ROTATION AND THE DIRECTION OF ROTATION CHANGES ACCORDING TO THE USER'S DESIRE TO MOVE THE DEVICE IN PARTICULAR DIRECTION(I:E; TAKE OFF MOTION, LANDING MOTION, FORWARD MOTION, BACKWARD MOTION, RIGHT MOTION).

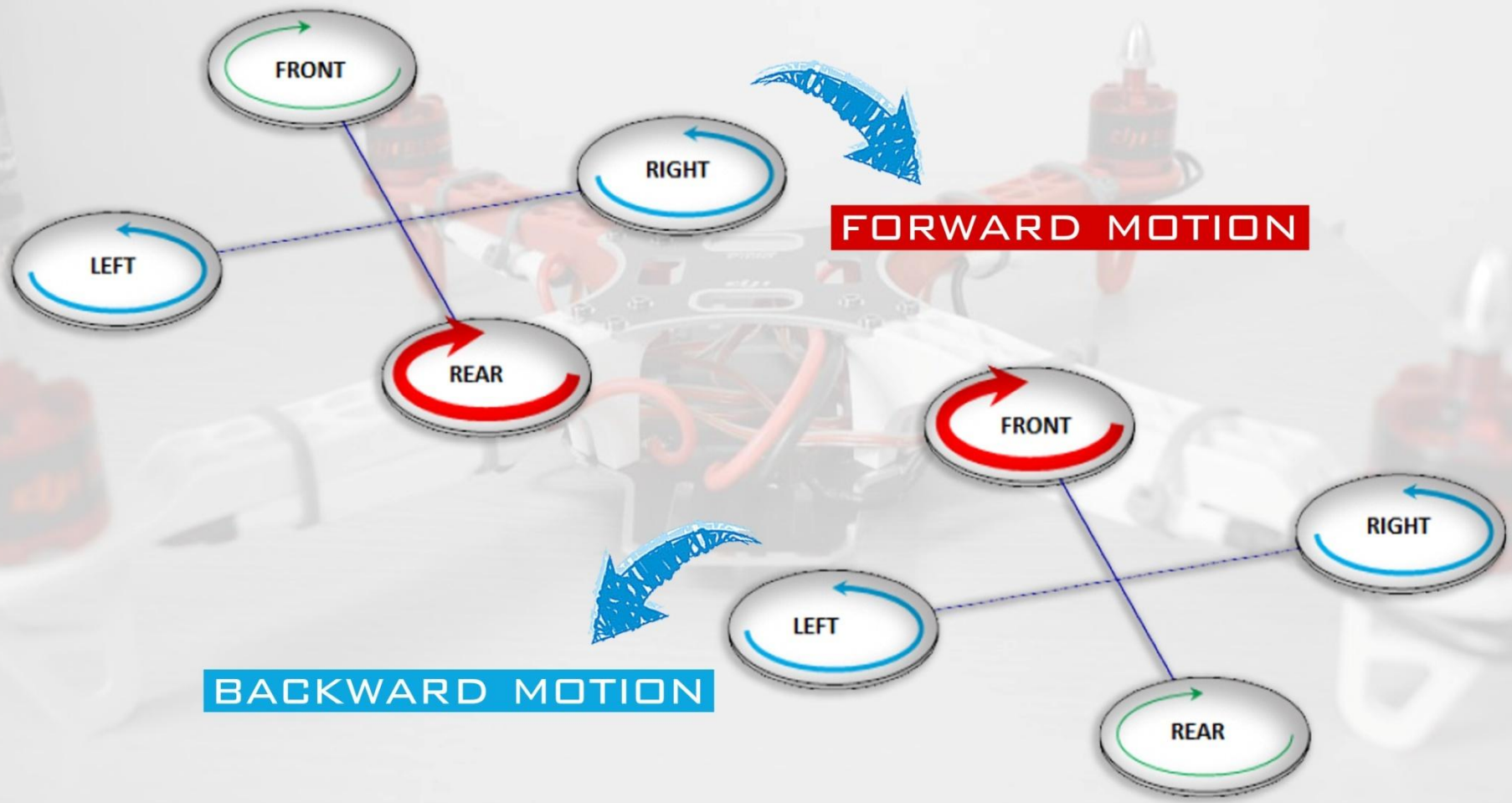
💡 THE ROTATION OF MOTOR'S CHANGES AS PER THE TRANSMITTED SIGNAL SEND FROM THE SIX CHANNEL TRANSMITTER.

💡 THE SIGNAL FROM MICRO CONTROLLER GOES TO 'ESC'S WHICH IN TURN CONTROLS THE SPEED OF MORTOR.THE PROGRAM FOR WHICH IS WRITTEN IN THE 'AT-MEGA 16' CHIP.

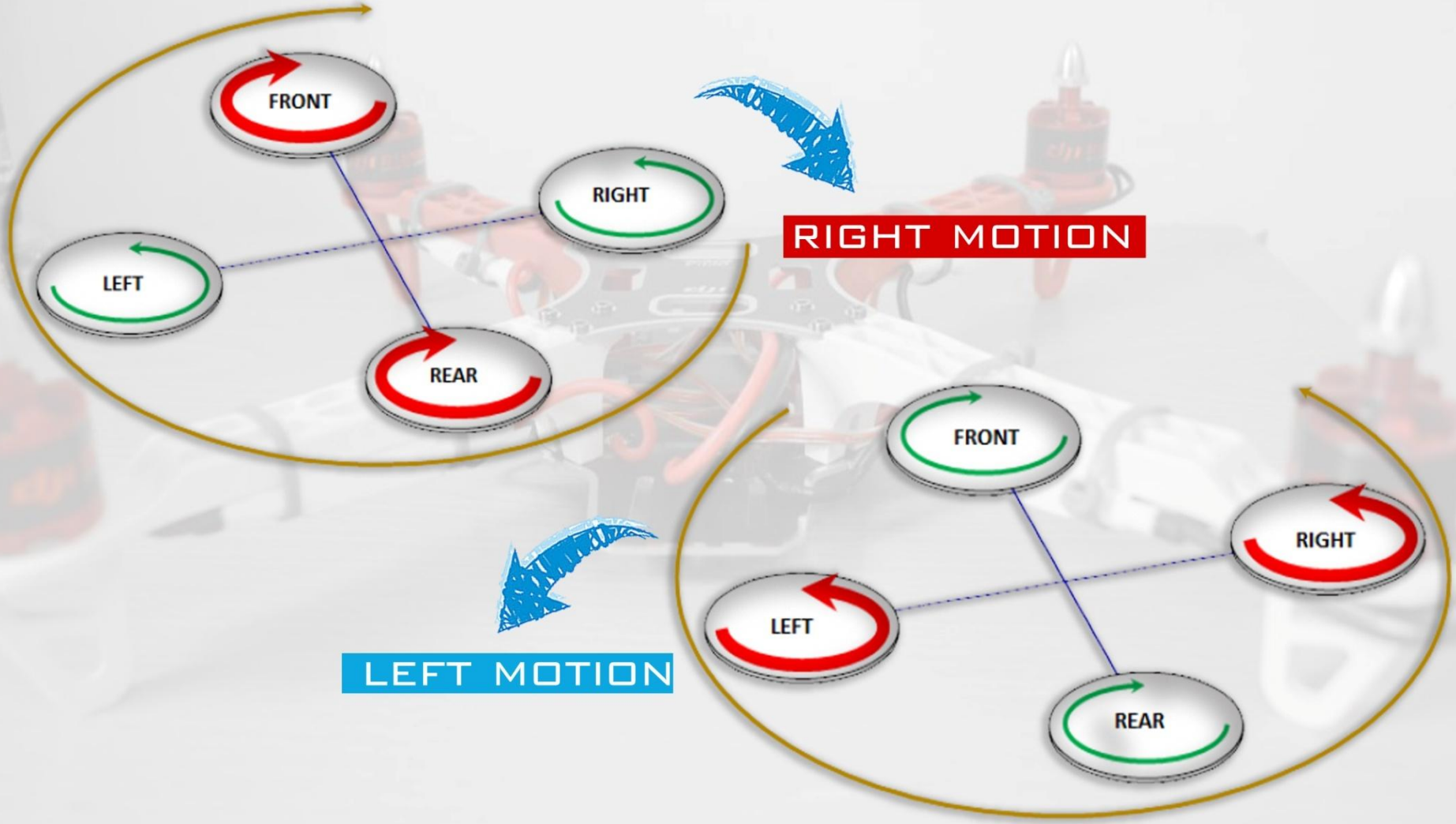
# WORKING PRINCIPLES:- MOTOR ROTATION



# **WORKING PRINCIPLES:- MOTOR ROTATION**

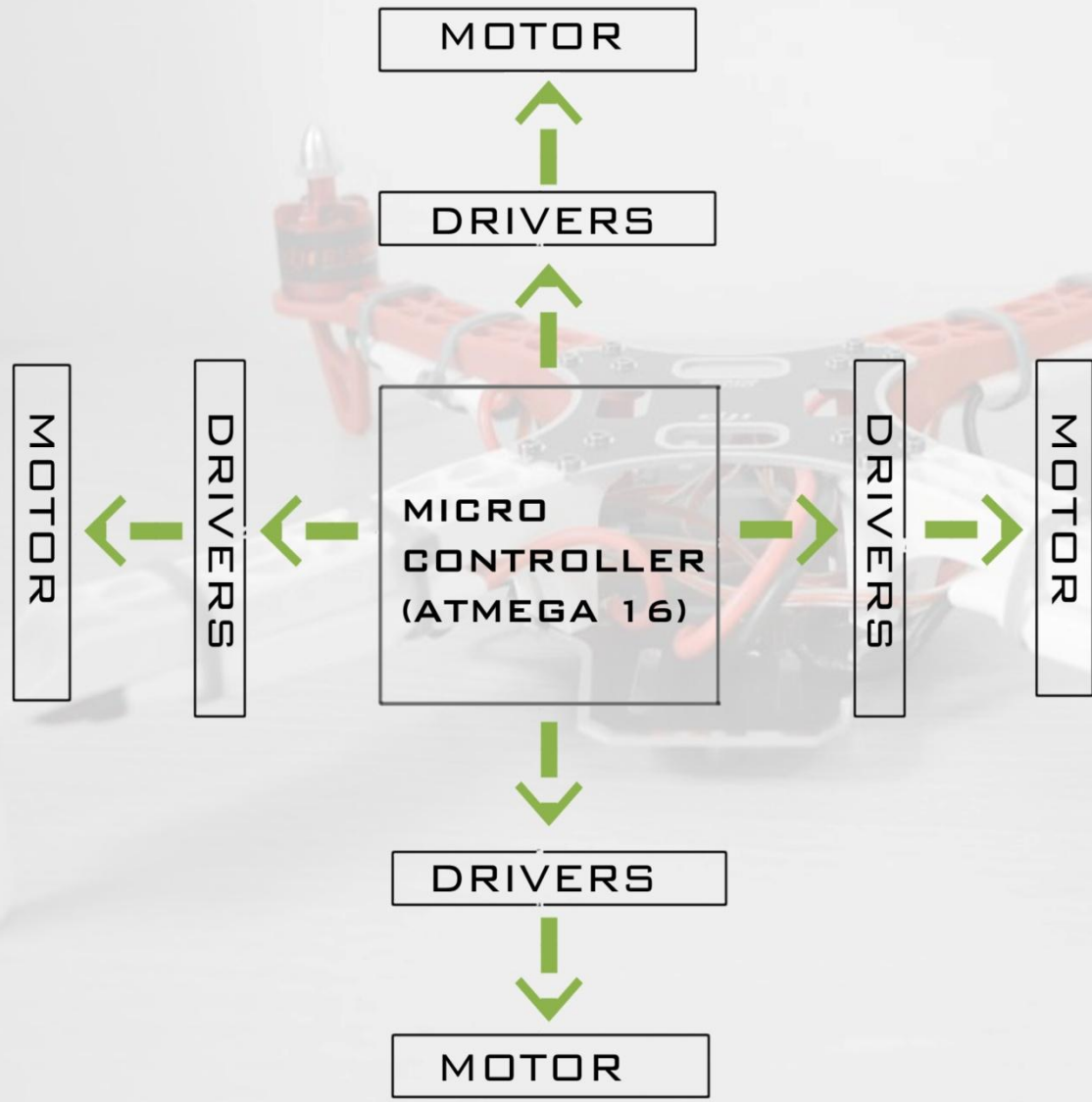


# WORKING PRINCIPLES:- MOTOR ROTATION

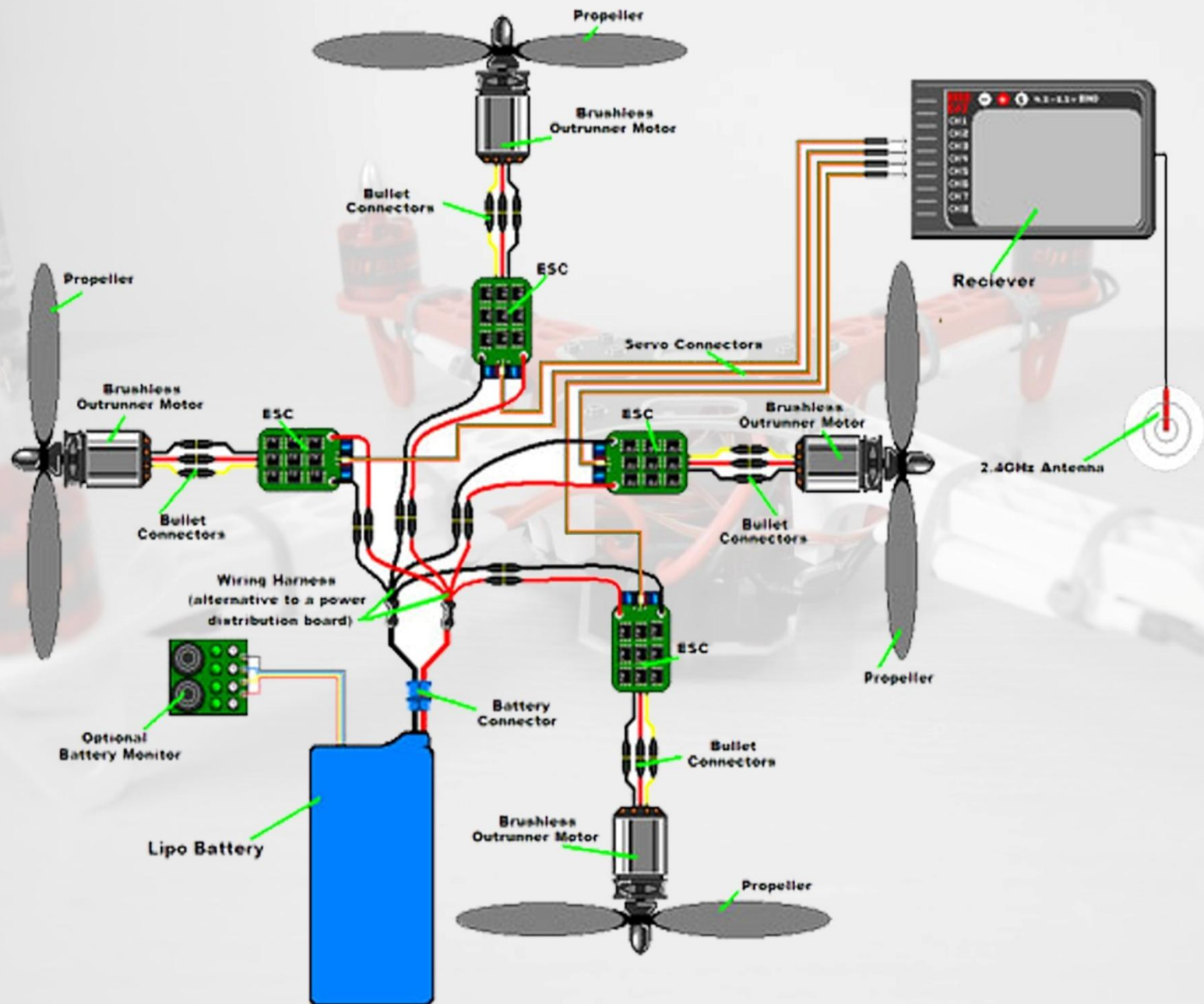




# BLOCK DIAGRAM:



# TYPICAL QUADCOPTER LAYOUT:



# APPLICATIONS:

CAPTURE PICTURES OF SPORTS EVENTS.



TAKE UNIQUE PHOTOGRAPHS FROM HARD  
TO REACH PLACES.



GIZMODO

MONITOR AGRICULTURAL AND ENVIRONMENTAL  
CONDITIONS.



FACILATED INSPECTIONS OF BUILDING AND  
MONITOR CONSTRUCTION PROJECTS.



ENHANCE FIELD PROJECTS, SUCH AS  
STUDY WILD LIFE FROM A DISTANCE.



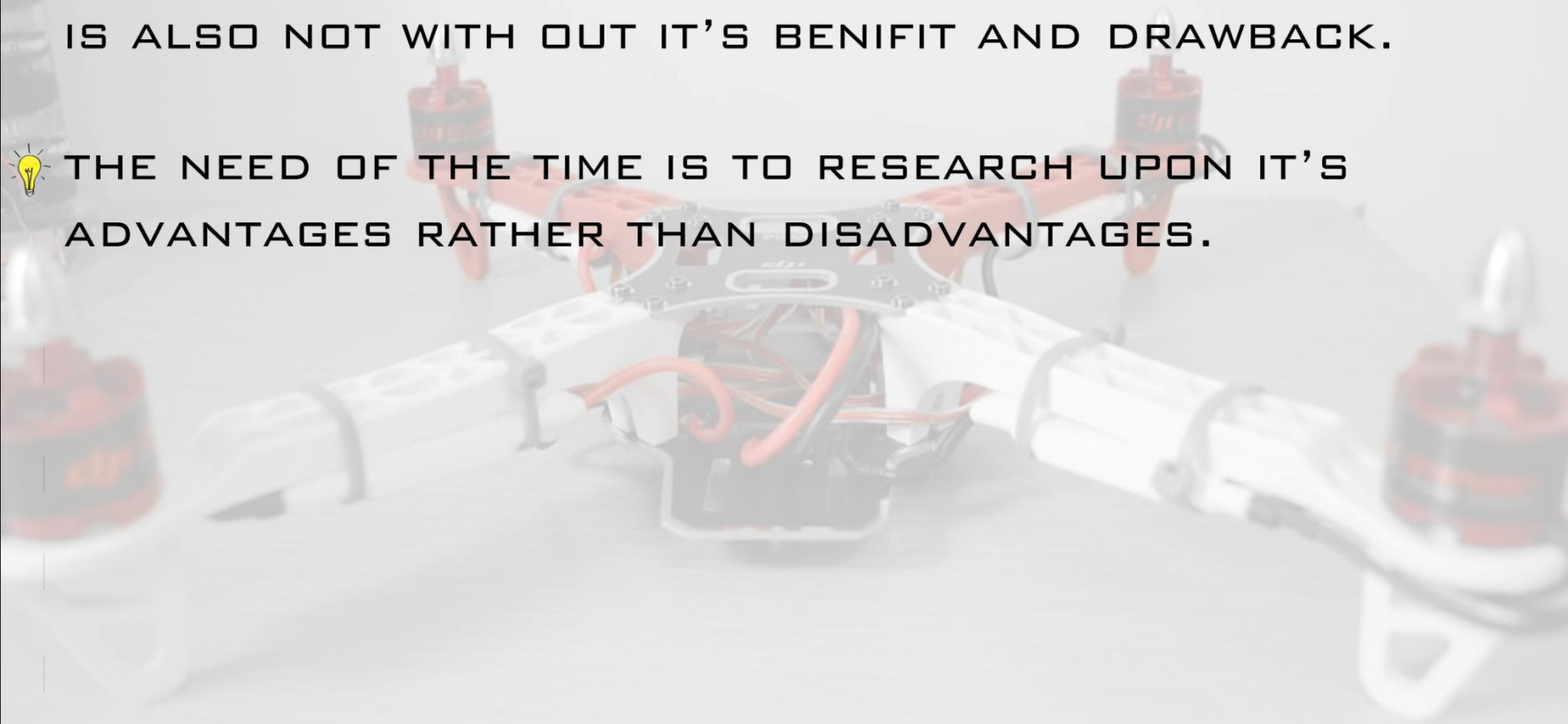
# **CONCLUSION:**



IT CAN BE CONCLUDED FROM THE ABOVE DISCUSSION THAT AS WITH OTHER MAN MADE TECHNOLOGIES THIS IS ALSO NOT WITH OUT IT'S BENIFIT AND DRAWBACK.



THE NEED OF THE TIME IS TO RESEARCH UPON IT'S ADVANTAGES RATHER THAN DISADVANTAGES.





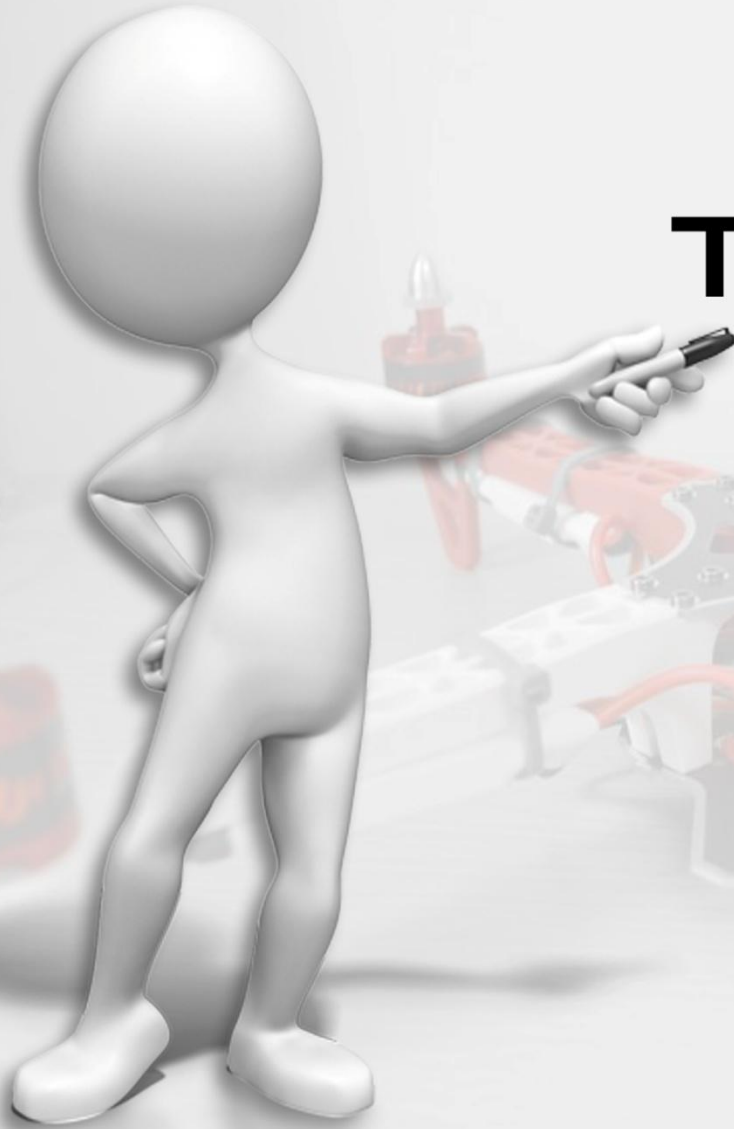
# REFERENCE:

→ [Google](#)

→  **WIKIPEDIA**  
The Free Encyclopedia

→  **slideshare**

**THANK YOU...**



**PRESENTED BY:- TUSAR RANJAN JENA**



**ANY QUERY.....**

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