

# **MULTI PURPOSE MILITARY SERVICE ROBOT**

## **Abstract:**

Robotics has been a staple of advanced manufacturing for over half a century. As robots and their peripheral equipment become more sophisticated, reliable and miniaturized, these systems are increasingly being utilized for military and law enforcement purposes. Mobile robotics play an increasingly important role in military matters, from patrol to dealing with potential explosives. "With suitable sensors to perform different missions, mobile robots are operated remotely for reconnaissance patrol an operator. WIFI technology aims to exchange data wirelessly at a short distance using radio wave transmission comprising features to create ease, perception and controllability. In this paper we have designed a robot that can be controlled using wireless technology. According to commands received from android the robot motion can be controlled.

## **Overview:**

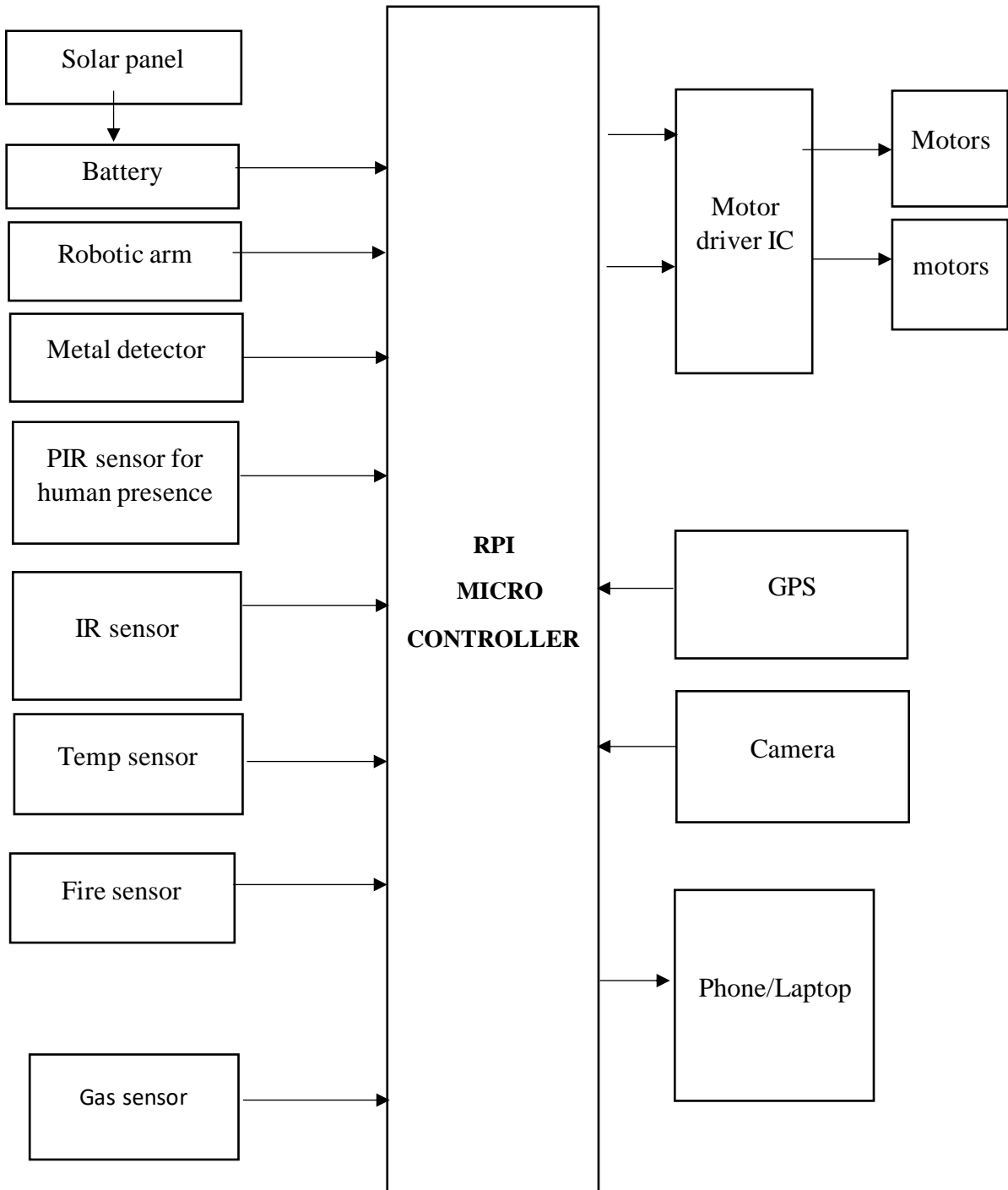
This project describes a new economical solution of robot control systems. The presented robot control system can be used for different sophisticated robot applications. The project aims in designing a robot which is capable of detecting human beings and land mines in its path and which is wirelessly controlled through mobile using WI-FI technology and the live video of the war field can be seen on the PC. It is a very low-cost robot used to monitor the Warfield. The robot can be moved in all the directions using the PC wirelessly.

The controlling device of the whole system is a Microcontroller. Whenever the user presses a button in the mobile, the data related to that button is sent through WI-FI interfaced to mobile. This data will be received by the WI-FI in the robot system and feeds this to Microcontroller which judges the relevant task to the information received and acts accordingly. The live video from the camera in the robot system can be sent to PC. The Microcontrollers used in the project are programmed using phyton language.

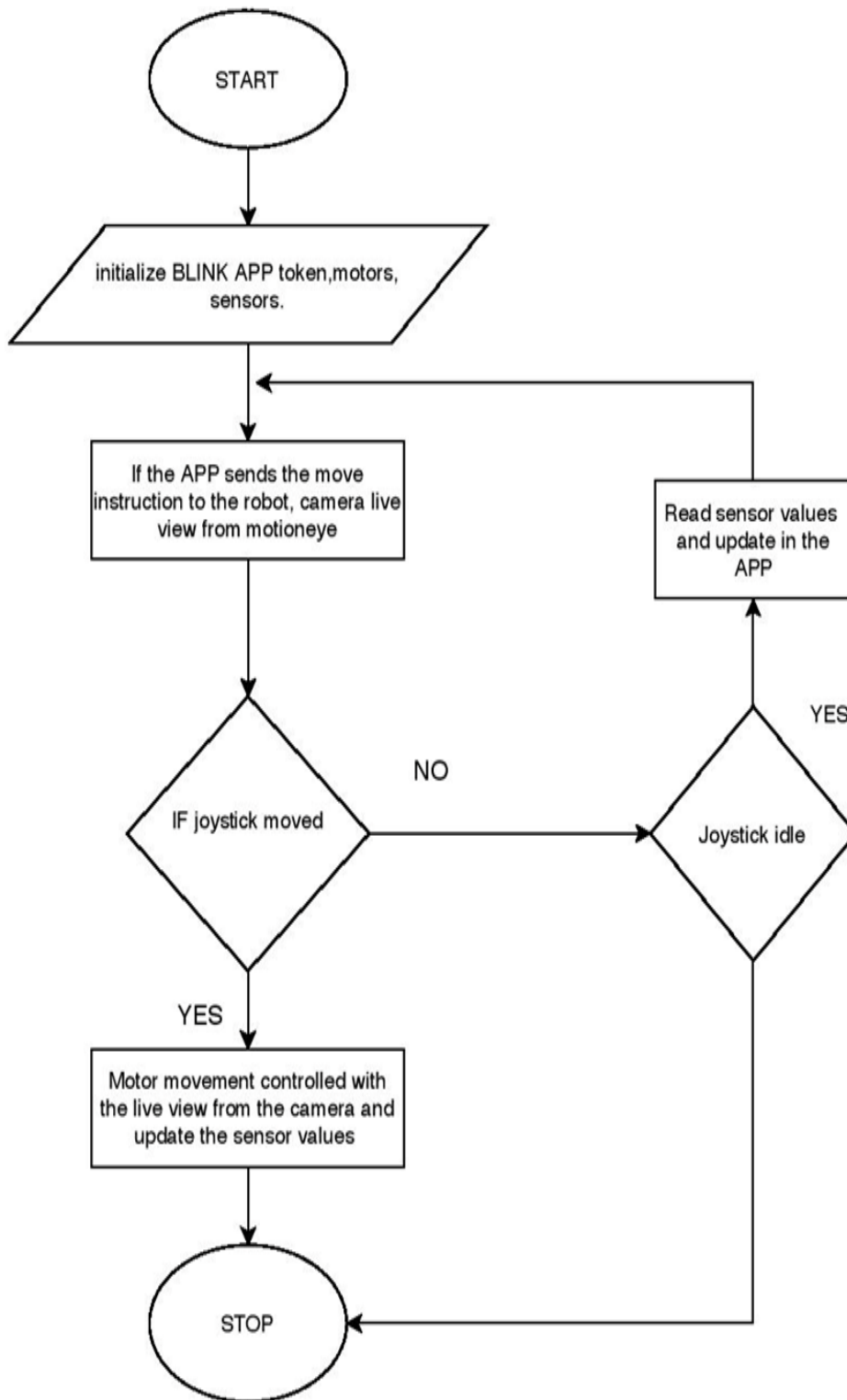
This project makes use of a micro controller, which is programmed, with the help of phyton instructions. This Microcontroller is capable of communicating with input and output modules. The controller is interfaced with dc motors, which are fixed to the Robot to control the direction of the Robot.

The War field robot using raspberry pi microcontroller is an exclusive project that can move the robot according to the instructions given by mobile and also alerts when any metal is being detected by it. It also alerts when any human beings are near by using PIR sensor. temperature sensor and fire sensor is used to detect hazardous whether condition and fire at restricted areas.it also detect when any obstacles are near by using IR sensor. GPS is used for location tracking.

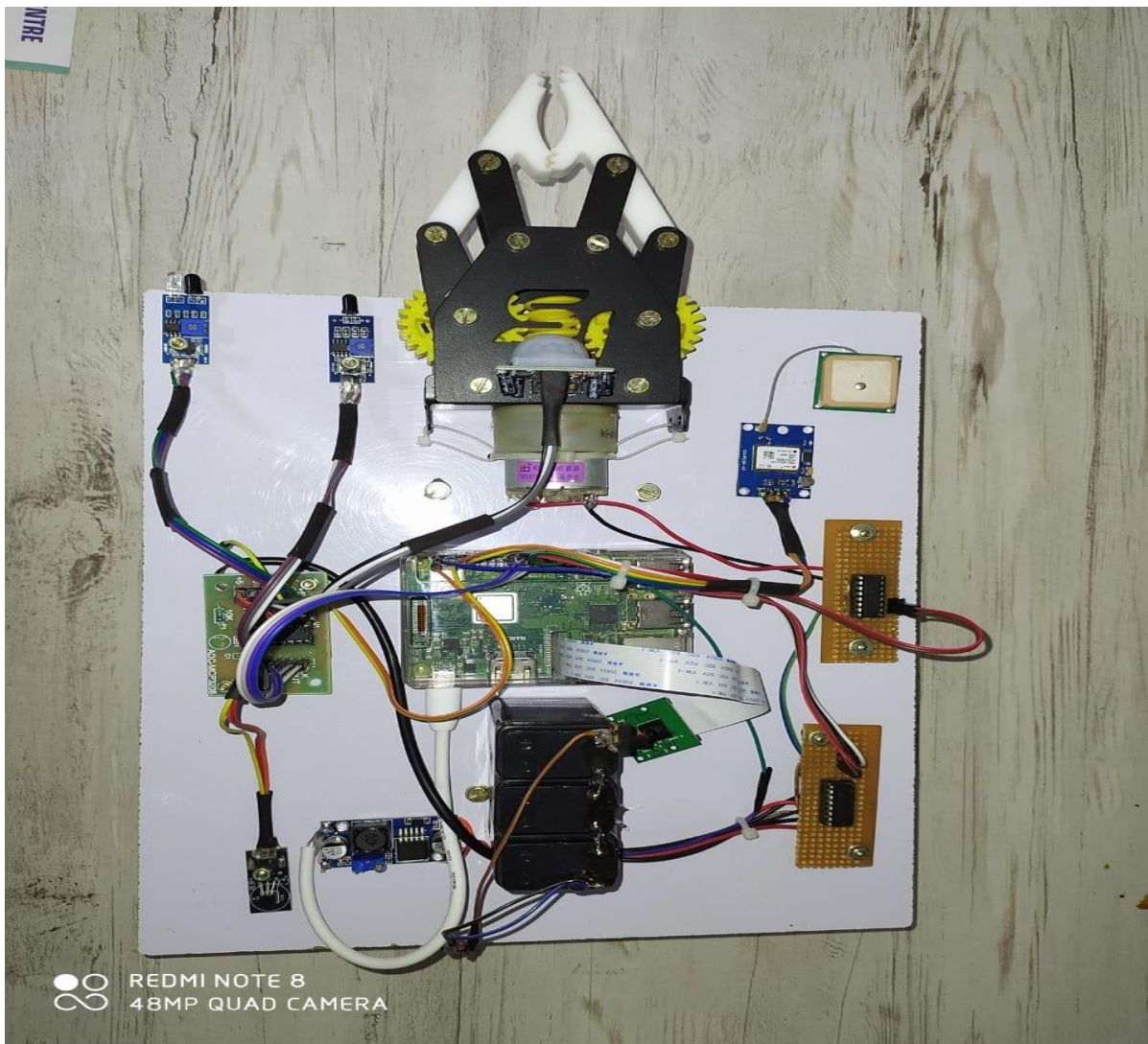
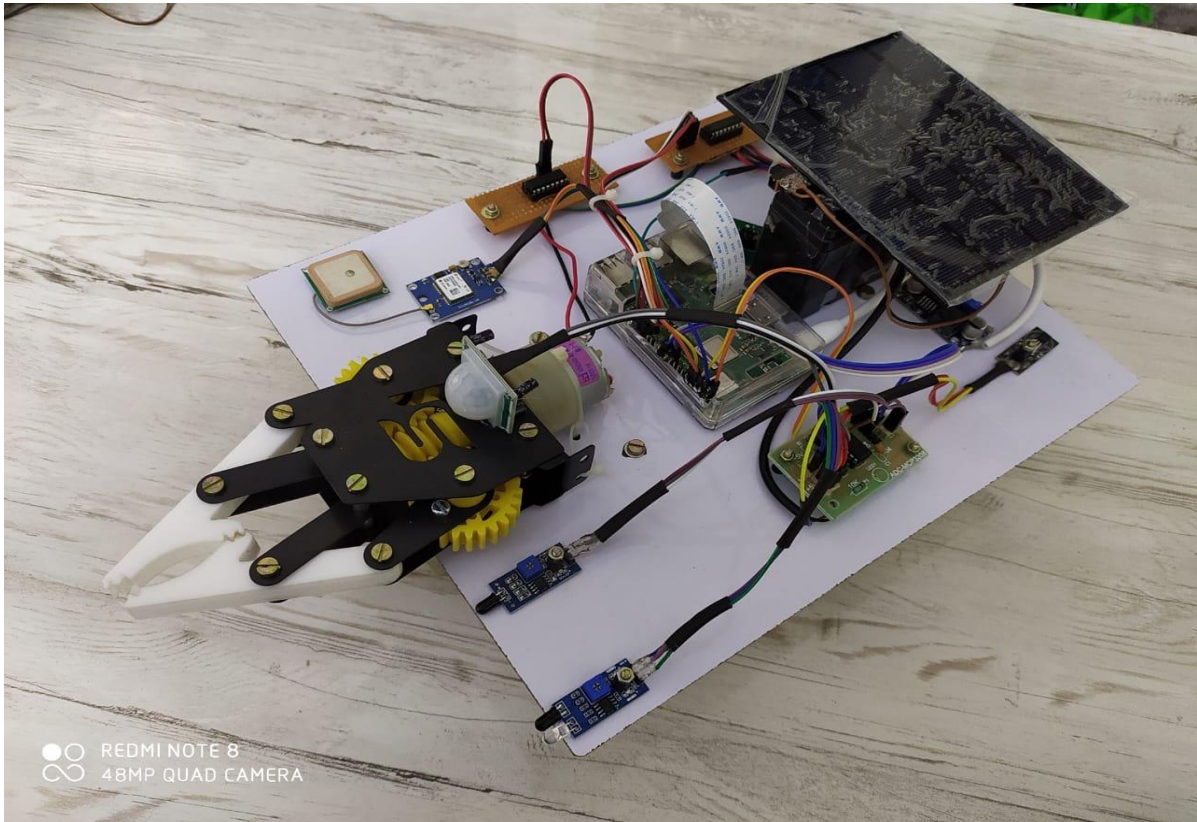
# BASIC BLOCK DIAGRAM



# FLOW CHART



# BASIC PROTOTYPE



## **ADVANTAGES**

- Suitable for wireless sensor network.
- Defence forces, Entertainment, Space exploration.
- Security systems and many dangerous mission execution.
- robot will check all parameters continuously.
- All sensors value will be check on controlling device (phone/laptop) continuously.
- This robot is used for surveillance the terrors attack building to protect the human life.
- Its is a cost-effective robot.

## **CONCLUTION**

- The type of communication technique enhance its range of operation.
- where the user can control the movement of robot from any part of world by getting live video of surroundings as feedback.
- The robotic system with different sub modules can widely be used as surveillance robot for security purpose & emergency rescue operations
- where human cannot foot space & user will be able to alert prior to intruder in his premises.