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**Mini Project**

**Synopsis on**

# "Smart WiFi Controlled Pick-N-Place Line Following Robot"

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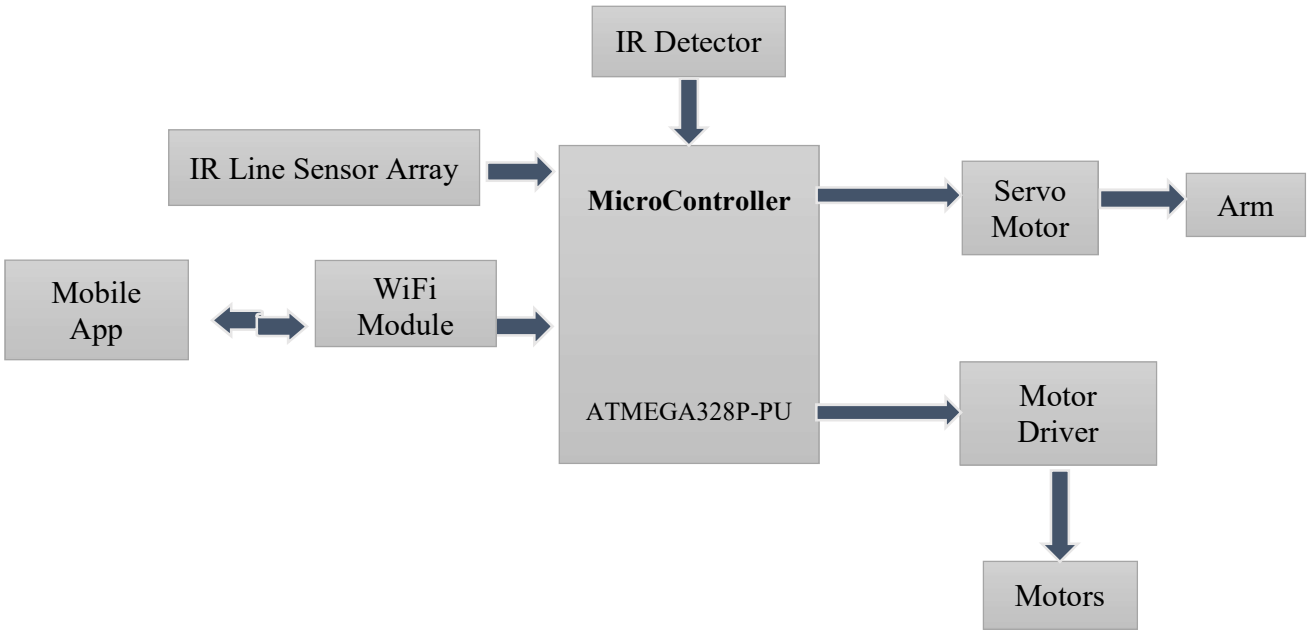
# Title: Smart WiFi Controlled Pick-N-Place Line Following Robot

## Brief Description of Project:

- Robot will be used to Pick-N-Place object from different locations.
- There can be N number of destination locations.
- The locations for picking or placing objects are given over WiFi to the Robot.
- Robot follows the path using Line (White over Black line) as the guideline and reach to the destined location.
- The arm over the bot picks the object once it is detected in front.
- After picking up it makes a 180* turn and then return back to the starting position/position according to the command from user.
- In future, camera module will be implemented along with Raspberry Pi and the user will also get to choose what object the bot have to pick.
- Use: This Robot can have application in autonomous garbage collection, items or goods management in warehouses of delivery companies, or to do any autonomous work on any specified location.

## Block Diagram/Circuit Diagram:



## Component List:

| | |
|---|---|
| Robot chassis | 400rs |
| Motors | 500rs |
| Tyres | 50rs |
| Battery | 400rs |
| Switch | 10rs |
| Microcontroller (ATMEGA328p-Pu) | 110rs |
| Wifi (Esp8266-12E) | 150rs |
| Motor Driver(L293D) | 200rs |
| Servo Motors [2] | 300rs |
| Arm mechanism | 150rs |
| IR Line Sensor | 150rs |
| | 2420rs |

**Approximate Budget:** approximately 2500rs.

## Reference:-


- Espressif.com
- Arduino.com