

Robot Car with attachable turret! (Arduino Compatible!)



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Summary

This is a cool robotic car to keep you busy if you have been longing for a fun tinkering project! (Arduino or ESP32)

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Robot Car Platform - 2024

I started this project back in 2022 after longing for a new project to set my eyes to! This robotics platform is compatible with Arduino boards as well as the popular ESP 32 chip which enables Wi-Fi capability. Assembly is simple and just requires a bit of glue, hot glue works perfect and bonds well.

The prints are easy to do without major supports. I printed it on my good old Ender 3 Pro.

Features and customizability:

- Remote control function when using a Wi-Fi compatible board like ESP32

- You may use your **own tyres** or even rugged **3d printable tracks** (much like the Snow-Cat from RCTestFlight)
- Easy printable parts
- **Optional** LED spotlight to deter anyone!
- **Optional** remote monitoring via Camera
- Houses tons of sensors to help with Automation/Waypoints.
- 12v fan cooling components
- Easy power-up process via one button
- Has a 360 turret you can mount on top that houses the sensors! (See pictures included!)

Here is a parts list for what I used: (All widely available at electronics stores)

- 9 x 5mm LED
- PIR sensor module
- Ultrasonic sensor module
- Flame sensor module
- Raspberry Pi Camera Module ***Optional**
- Raspberry Pi ***Optional**
- L298N Motor driver
- 12v DC Motors
- LED Spotlight panel ***Optional**
- 12v AA battery holder
- 8 x AA batteries
- Jumper cables
- 180 degree Servo motor 9g (This turns the turret)

It is printed in a few parts that can be joined together with nuts and bolts or even glue.

NOTE that holes on side are meant for:

- **Back ones** are for the motor-shafts
- **Front ones** are for ball bearings where you can attach all kinds of wheels or tracks!

Happy printing!

Model files



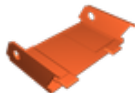
bumper-1.stl



top-frame.stl



servo-mount.stl



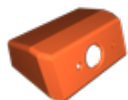
middle-section.stl



back-bumper.stl



turret-lid.stl



turret.stl

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