2. Bluetooth controlled RC Car

A Bluetooth-controlled robot car powered by a robotics board showcases innovative autonomous navigation. It uses Bluetooth to receive remote commands for movement, integrates sensors for obstacle detection, and combines IoT functionality with wireless control making it a versatile tool for automation and remote operations.

Hardware Connections

a. **Assemble the Car Chassis:** Attach 4 DC motors with wheels to the chassis slots and secure them with screws.

b. **Connect Motors to Robotics Board:** Connect the motors to M1, M2, M3, and M4 ports on the board (match JST correctly for motor direction).

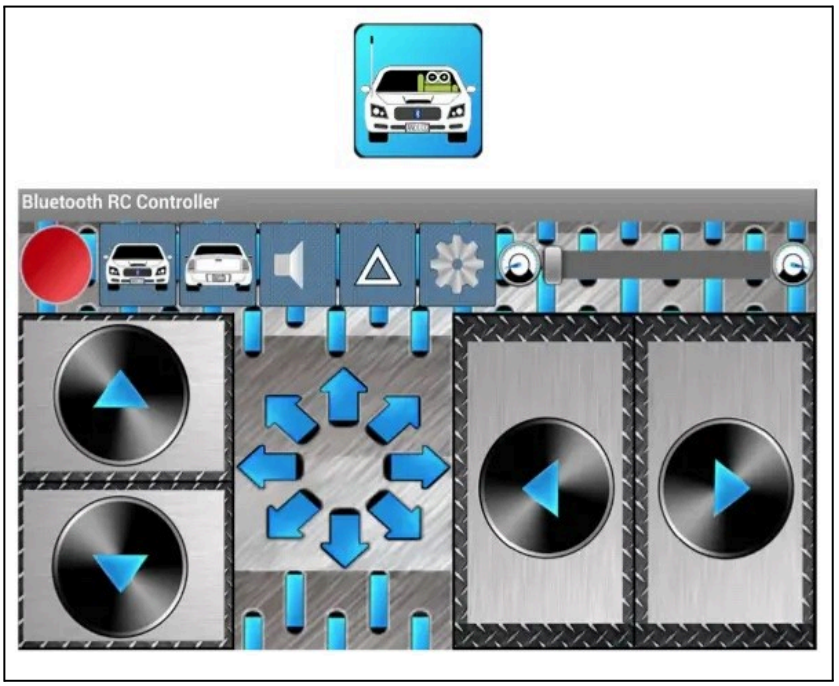
c. **Mount the Board:** Fix the Robotics Board on the top chassis plate using screws or standoffs and route motor wires neatly.

d. **Power Connections:** Connect the power supply to the board's DC input port and ensure the switch is OFF until setup is complete.

e. **Program the ESP32:** Connect the ESP32 to a computer, open Arduino IDE, install BluetoothSerial library, and upload motor control code.

f. **Test Bluetooth Pairing:** Pair the ESP32 with a Bluetooth controller app on your smartphone (device name: ESP32CAR).

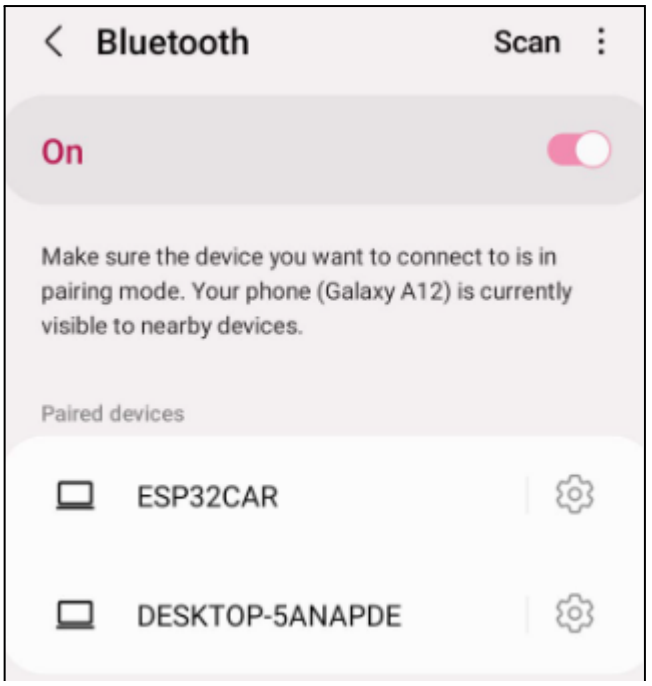
1. Install the Bluetooth Control Car application using the following QR code.



Download BT Control Car APK

2. Turn on Bluetooth, scan for devices, select "**ESP32CAR**," and click "**Connect/Pair.**"

3. Pair your device with ESP32CAR, open the Bluetooth RC Car app, grant Bluetooth permissions if prompted, click the settings icon, select "**Connect to Car**," choose "**ESP32CAR**," and ensure the red light turns green to confirm connection.



g. **Control the Car:** Use app commands (Forward, Backward, Left, Right, Stop) to control the RC car and ensure smooth motor operation.