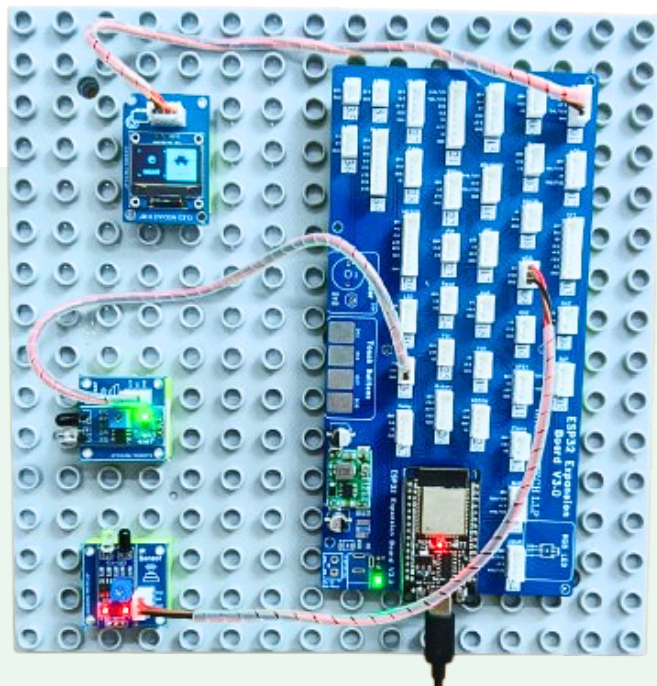


PARKING DISPLAY

Smart Parking Display — Real-Time Parking Vacancy Detection Module.

2026



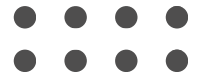
Phone
9958007460



Website
www.sagedel.com

PARKING DISPLAY

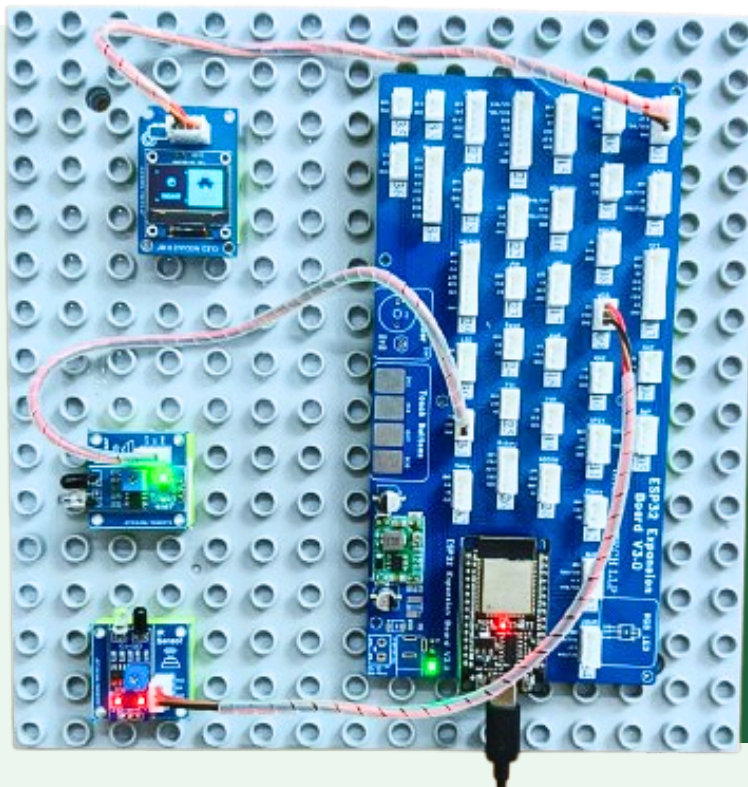
Objective:



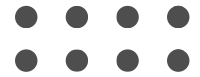
Learn how to interface IR obstacle sensors and an OLED display with an ESP32 to detect parking spot occupancy and display the status in real time.

What it Does:

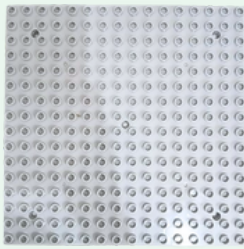
The ESP32 continuously reads the IR sensors to detect whether parking spots are occupied or vacant. The OLED display shows the real-time status of each parking spot as "VACANT" or "OCCUPIED."



Modules & Components used:



ESP Expansion Board



Lego board



OLED Module



IR Sensor



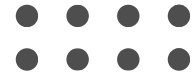
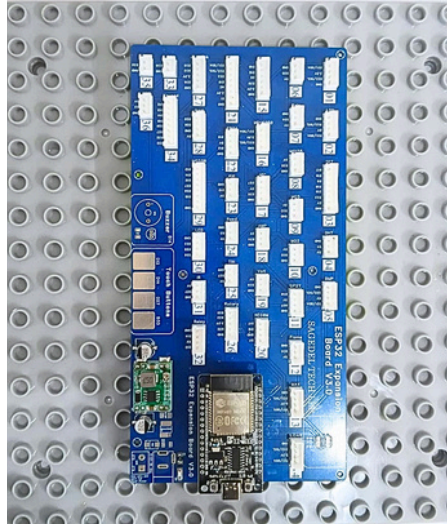
USB cable



Connector

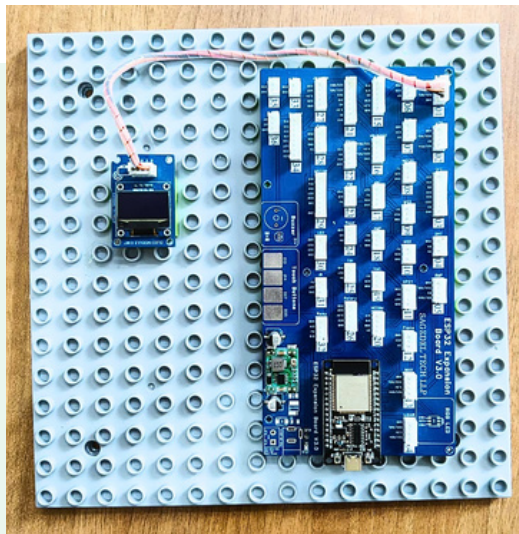
Step-by-Step Assembly & Connections

Step 1: Place the ESP32 Expansion Board securely on the lego plate and align it with the mounting holes.



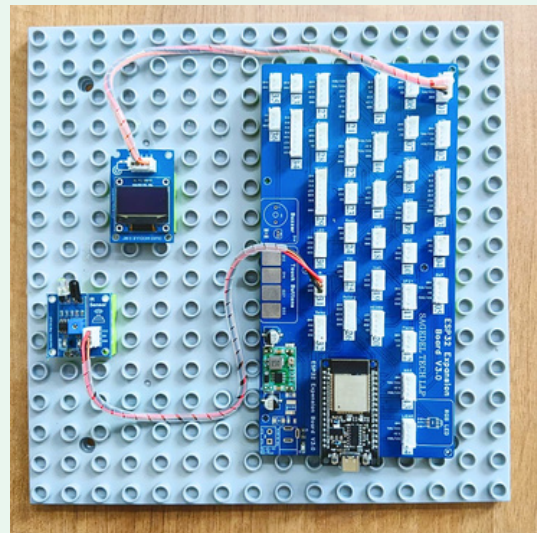
Step 1

Step 2: Connect the OLED Module to **Port No. 1** on the ESP32 Expansion Board.



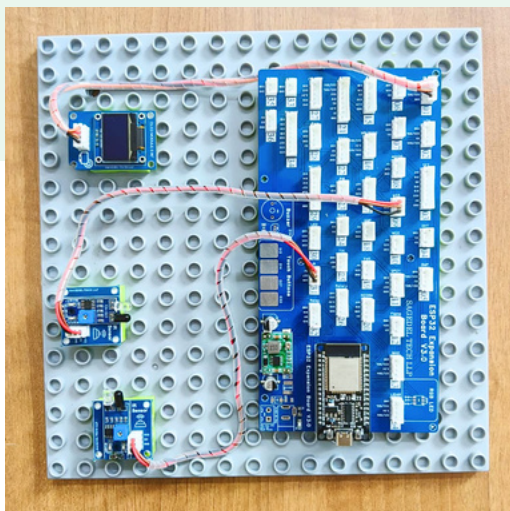
Step 2

Step 3: Connect IR Sensor 1 to **Connector No. 31** on the ESP32 Expansion Board.



Step 3

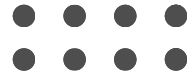
Step 4: Connect IR Sensor 2 to **Connector No. 9** on the ESP32 Expansion Board.



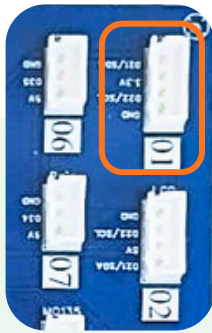
Step 4

Step 3

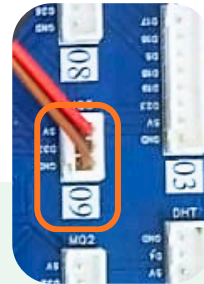
Specific Port Connections



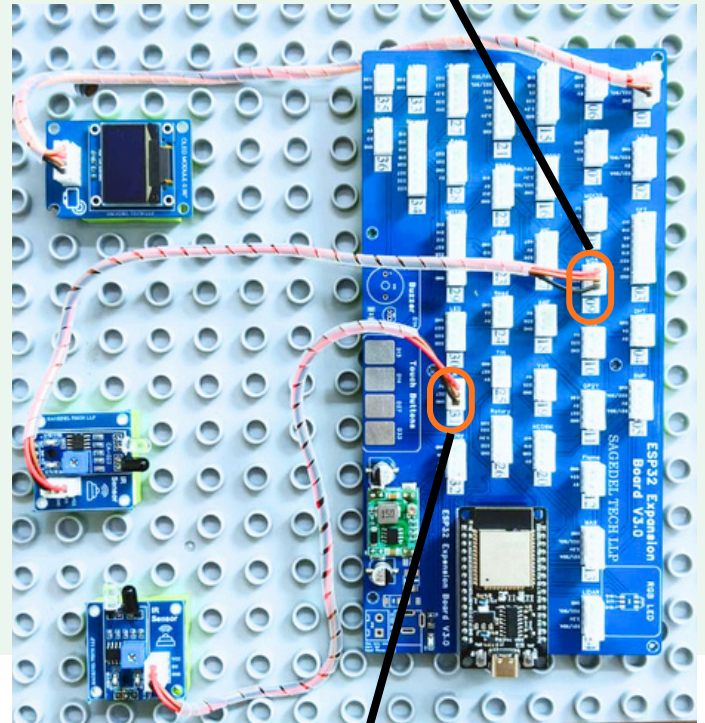
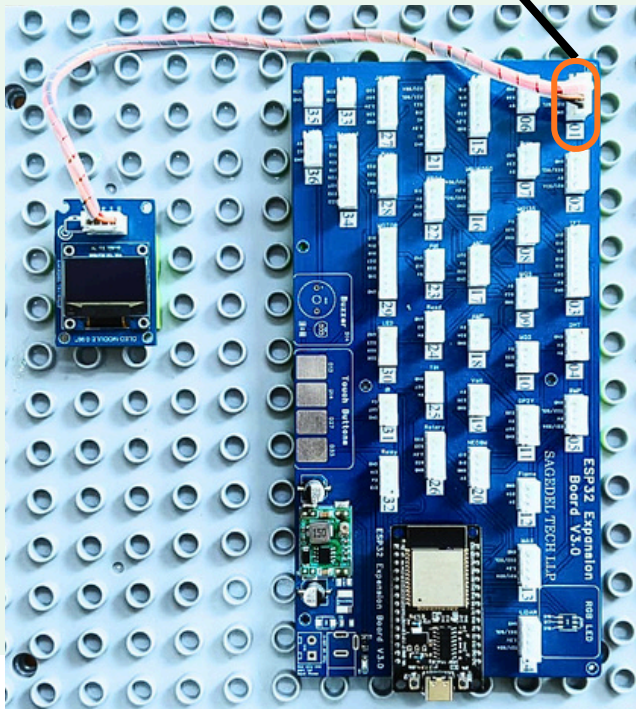
- oled → port no. 1
- IR Sensor 1 → port no. 31
- IR Sensor 2 → port no. 9



connect OLED Module to
connector no. 1

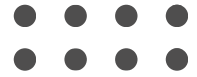


connect IR Sensor 2 to
connector no. 9

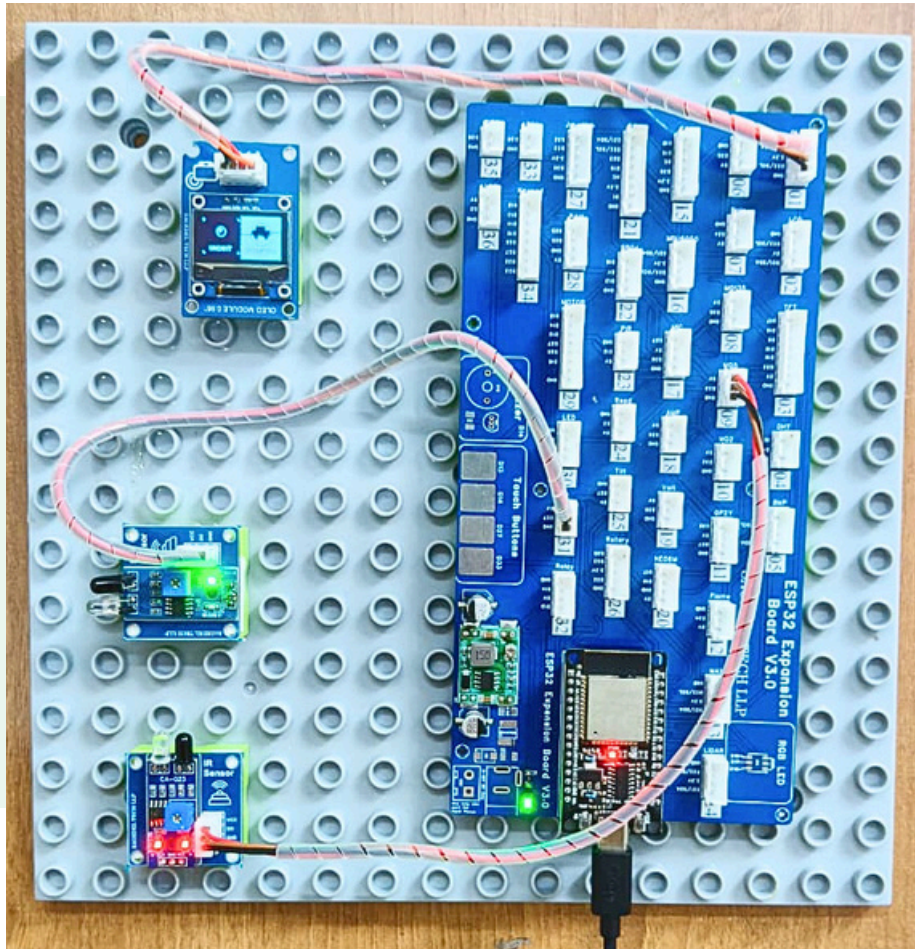


connect IR Sensor 1 to
connector no. 31

Final Management



- Power on the ESP32 and observe the parking status on the OLED display. The two IR sensors detect whether each parking spot is vacant or occupied, and the status updates in real time.



Calibration:

It involves detecting vehicles in two parking spots using IR sensors and displaying their VACANT or OCCUPIED status on the OLED display in real time.