Wiring Guide

GPS Module (e.g., NEO-6M)

- GPS TX → ESP32 GPIO16 (RX)
- GPS RX → ESP32 GPIO17 (TX) *(optional if only reading data)*
- VCC → 3.3V or 5V *(check module requirement)*
- GND → GND

GSM Module (e.g., SIM800L)

Needs external power (≥2A, 3.7–4.2V) — do NOT power from ESP32 3.3V pin

- GSM TX → ESP32 GPIO26 (RX)
- GSM RX → ESP32 GPIO27 (TX)
  May need voltage divider (ESP32 TX is 3.3V, SIM800L expects ≤2.8V)
- VCC → 3.7V (battery or regulator)
- GND → GND

Button

- One leg to ESP32 GPIO4
- Other leg to GND
- ESP32 uses `INPUT_PULLUP` — button is active **LOW**

Switch

- One side to ESP32 GPIO13
- Other side to GND
- Also uses `INPUT_PULLUP` — active **LOW**

Heart Sensor

- Signal → ESP32 GPIO34
- VCC → 3.3V or 5V (check sensor)
- GND → GND

Heat Sensor (Thermistor or Analog Temp Sensor)

- Signal → ESP32 GPIO35
- VCC → 3.3V or 5V
- GND → GND

Peltier

- Connect Peltier + to **external power** (e.g., 5V 2A power supply)
- Connect Peltier – to **N-Channel MOSFET Drain**
- Connect MOSFET Source to **GND**
- Connect ESP32 GPIO14 to **MOSFET Gate** (through 220Ω resistor)
- Add **flyback diode** if using with motor or inductor