https://github.com/Sidiment/Hardware-Software-Lab.git

My Resistor:

R1 = 220 ohm

R2 = 150 ohm

R3 = 24K ohm

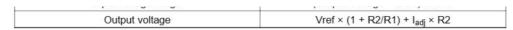
R4 = 30K ohm

R5 = 360k ohm

R6 = 300k ohm

R7 = 5 ohm

R8 = 20 ohm



Where Vref = 1.25v Vout = 2.1v ladj is often as 0 => R1 R2

R7 = (2.1v-2v)/2mA = 5ohm

$$R_1 = \left(\frac{V_{OUT}}{V_{REF}} - 1\right) \times R_2$$
 => Vref = 1.2246 / Vout = 2.2v / R4 = 30.1k ohm => R3 = 24k ohm

 $R8 = 2.2v / 2mA \sim = 20 \text{ ohm}$

$$V_{\text{out}} = V_{\text{REF}} \left(1 + \frac{\text{R1}}{\text{R2}} \right)$$
 let R6(R2) = 300k ohm R5 = 360k ohm

```
PLATFORMIO
                                                                                       © main.cpp ×
 PROJECT TASKS
> ⊜ Default
                                                                       // Define analog pins
const int VOUT1_PIN = A2; // Analog pin A2
const int VOUT2_PIN = A0; // Analog pin A6
  ∨ 🛅 General
○ Build
                                                                          // Start serial communication
Serial.begin(115200);
    O Program Size
    O Upload Filesystem Image OTA
                                                                           // ADC_ATTEN_DB_11 -> 0 to 3.3V (most commonly used for full-range voltage)
analogSetAttenuation(ADC_11db); // Set attenuation to handle up to 3.3V
 ∨ PIO Home
                                                                                                                                                                                                                    ∑ Upload and Monitor (seeed_xiao_esp32c3) - Task ( + ∨ □ · · · · · · ×
                                                              Hard resetting via RTS pin...
— Terminal on /dev/cu.usbmodem101 | 9600 8-N-1
— Available filters and text transformations: colorize, debug, default, direct, esp32_exception_decoder, hexlify, log2file, nocontrol, printable, send_on_enter, t
                                                                    More details at https://bit.ly/pio-monitor-filters
Quit: Ctrl+C | Menu: Ctrl+T | Help: Ctrl+T followed by Ctrl+H
IT Voltage: 3.380 V
IT Voltage: 3.380 V
IT Voltage: 3.380 V
IT Voltage: 3.380 V
     Libraries
      Start Debugging
```

